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All Crude Production and Storage Stock Records Fall, But Prices Advance

By Paul Wagner
N.P.N. STAFF WRITER

HOUSTON, May 23

STRENGTH in domestic crude markets, emphasized by the advance, May 20, of 15 to 25 cents a barrel in the Eastern fields, comes at a time when new high records for production and stocks of petroleum have been set.

The Eastern advance had been preceded by an increase at Smackover, Ark., where heavy crude was put up 10 cents to 70 cents a barrel at the wells, and was followed by another 10-cent raise to 80 cents, May 22.

Smackover's advance was also made in the face of a production record which surpassed all other high yields of an individual field in U. S. petroleum history. Within 10 days, the Smackover deep pay wells had twice exceeded 360,000 barrels daily and the combined production of the light oil zone and the two heavy oil zones had twice reached 447,000 barrels daily.

Daily average crude production of all domestic fields reached 2,305,950 barrels in the week ended May 16, exceeding the earlier high record of September 8, 1923, which was 2,280,700 barrels, reflecting the peak of the Los Angeles Basin outpour of light oil in that year.

Storage stock figures consolidated by the American Petroleum Institute as of April 1, last, credited the industry with overall inventories of 519,868,445 barrels, or roughly 1,800,000 barrels more than the maximum of 518,043,588 barrels reached at the end of August, 1924.

A decline in stocks through December brought the total storage of petroleum and its products to 505,592,685 barrels, January 1, last, after which gains again set in. Accumulations to storage in the first three months of 1925 averaged nearly 5 million barrels monthly.

At the beginning of 1925 the available supply of crude was approximately 2,184,000 barrels daily, including imports from Mexico over and above the daily average production. These imports averaged between 260,000 and 270,000 barrels daily. Now with more than 2,300,000 barrels daily average domestic production the import figure is around 230,000 barrels daily. Imports plus domestic production bring the present available supply of crude to roughly 2,530,000 barrels daily, another record for the American petroleum industry.

Admittedly heavy oil production at Smackover has been mainly responsible for the setting of a new record of daily average yields. The explanation has been made that this is heavy oil and that it has moved mainly into other channels than the manufacture of gasoline; but how many times in the history of the petroleum industry has heavy oil from Mexico been known to break the crude market? Not once, but many.

Consuming Demand Foreseen

It becomes apparent, then, that some other factor than the obvious influence is at work to bring about the contradictory situation now existing in the petroleum industry. Students of conditions forsee the possibility of an unprecedented consuming demand for gasoline in 1925, coupled with a situation wherein the larger units in the industry are in better position to carry extensive stocks of petroleum and its products. The term consumption is here used to

Thinking in Terms of Gasoline Consumption

WITH all records for amount of crude and refined oils in storage broken, and also all records for production of crude in this country, why should prices in some fields be advancing and the general crude situation be tight, is a question many in the industry are asking?

Eliminate Smackover from the picture and you have a much better perspective of conditions. Smackover can be taken out, partly because it is a heavy crude with little gasoline content and partly because, even in its great volume, shipping facilities are held by a few companies and very little of the oil will get on the outside market.

Last year domestic production—outside Smackover—was 1,827,600 barrels daily the middle of May, and increasing every week. This year—outside Smackover—domestic production is 1,850,350 barrels and showing a downward tendency. Consumption expressed in terms of gasoline, is way ahead of last year.

Because of the unexpectedly large increase in gasoline consumption so far this year over last, due in part to better motoring weather this year, the industry more this year than previously is thinking and judging its operation in terms of gasoline consumption, including its 1925 crude requirements. If consumption thus far this year should later be shown to be abnormally high, the industry may now have a distorted point of view towards consumptive needs. Coupled with this fact that confidence is gaining in stable industrial conditions for future, not only in this country but abroad. Also many companies are in better shape this year than, for the last few years, to strengthen their position as regards future crude supplies by acquiring production or acreage or both. All of which may be reflected in the crude market.—V. B. G.

include exports as well as gallonage absorbed in domestic channels.

Stocks of finished products at refineries, April 1, last, are shown at 128,069,458 barrels as compared with 122,809,294 barrels, March 1, or an increase of nearly five million barrels. These figures compare with 121,594,345 barrels of refined products, April 1, 1924.

Best figures available on 1924 consumption of gasoline make up a total of 221,607,337 barrels. Of this total, the domestic consumption was placed at 192,572,337 barrels, including raw natural gasoline blended at points other than refineries. Export figures totalled 29,035,000 barrels.

Included in the total 1924 consumption were the following estimated and approximate quantities of the various grades of gasoline: raw natural gasoline blends, 20 million barrels; cracked gasoline, 40 million barrels; straight run gasoline, nearly 160 million barrels; and imports, 3.5 million barrels. These round figures check out within two or three million barrels of the consumption figures referred to in the preceding paragraph.

Increased Cracking Yields

Estimates of the production (manufacture) of gasoline in 1925 admit the possibility of increasing cracking yields to as high as 70 million barrels; raw natural gasoline blends, 24 million barrels. This, according to a statement by the president of a major company would give a total of 94 million barrels available from these sources as against 60 million barrels in 1924.

The remainder of 1925 requirements must come from straight-run refineries, which in 1924 obtained average gasoline yields amounting to 24.8 per cent of the crude charged to stills. The executive referred to stated to the writer his belief that average gasoline recoveries in straight run practice would not amount to more than 22.5 per cent in 1925.

On a basis of a 20 per cent increase in domestic consumption plus exports over 1924, there will be used this year nearly 266 million barrels of gasoline. Allowing for nominal imports from Mexico and 94 million barrels to come from raw natural blends and cracking, the quantity of straight-run motor fuel manufactured in 1925 would reach to approximately 168 million barrels if there were no drafts on finished oil stocks.

Roundly 675 million barrels of crude must be run through stills in straight-run practice to provide the aforementioned quantity of motor fuel at the 1924 yield figure of 24.8 per cent gasoline recovery. If this executive's estimate of lower yields for 1925 prove to be correct then the amount of crude to be put through stills must be proportionately increased.

The running of 1,851,000 barrels of crude daily through straight-run refineries would give a 1925 total of approximately 168,000,000 barrels of gasoline at the 1924 average recovery of 24.8 per cent. In the first three months of the present year, crude runs were approximately 1,890,000 barrels daily. The official April and May figures, of course, are not available. In this connection it may be said also that the April 1 consolidated stock figures of the American Petroleum Institute showed an increase in refined oil stocks of 5,260,164 barrels as compared with March 1, last.

Intention of attempting to set up a 1925 consumption increase figure is disclaimed by the writer. The foregoing 20 per cent figure is used simply for convenience and as a base from which to discuss possibilities ahead.

Were increased consumption to be figured at 17.5 per cent this year in contrast with last, then the advance in cracking and blending methods hereinbefore set up would more than take care of the greater demand.

Should it prove that a 25 per cent increase is shown in consumption plus exports in 1925 then it would be necessary to put 727 million barrels of crude through straight-run refineries this year, or a daily average for 1925 of about 1,992,000 barrels.

The foregoing figures contemplate the production (manufacture) of motor fuel keeping pace with consumption and there being no draft on gasoline storage.

Light Crude Production

Light crude production in the United States now averages roughly 1,410,000 barrels daily; it should not be overlooked, however, that many crudes testing less than 36 A. P. I. gravity show valuable motor fuel recoveries and are not to be peremptorily classified as heavy oil because of falling below an arbitrary dividing line between high grade and low grade materials.

Increased demand for high gasoline content crudes may mean drafts on light oil storage in future months of 1925, especially if new fields yielding these grades fail to materialize.

Students of the production situation are unable, however, to forsee additional fresh supplies in the immediate future, except in Oklahoma and southern Kansas, where they generally anticipate about 100,000 barrels daily new light oil production this summer.

Fresh supplies in the Mid-Continent are expected to result from the development of deep sands at Garber, at Rainbow Bend and in the Thomas and Hubbard pools, near Tonkawa. All these districts have been proved for deep oil in the siliceous lime or Wilcox series beds and the Garber pay at 4,400 feet gives promise of eventually rivalling Tonkawa for productivity.

Texas-Louisiana-Arkansas

Texas and North Louisiana are always possible of surprises, because of their vast petroleum resources to be eventually developed, but it is not apparent that these are to be immediately forthcoming.

In South Arkansas, it is not on the cards that light oil production is soon to be increased. Smackover will continue for months to come, however, to turn out vast quantities of heavy crude. It broke all production records in petroleum history, May 9 when 165 deep pay wells were producing 361,200 barrels daily. This was 5,000 barrels daily more than the record breaking daily production of the Powell, Texas, field, November 13, 1923, when that pool reached a one day peak of 356,000 barrels. Again

(Continued on page 28)

East Coast Gasoline Prices Advance

CLEVELAND, May 26.—The advance of one cent in the gasoline tank wagon and service station market in Standard of New Jersey territory today, to be followed by an advance of the same amount in Standard of New York territory tomorrow, is a reflection directly of the strengthening refinery price of gasoline in Group 3 and indirectly of the generally firm crude market.

Eastern tank wagon markets, this year particularly, have followed closely the course of the tank car price of gasoline at refineries. In fact the Standard of New Jersey, through an article in its official house organ, The Lamp, virtually announced that this company considered that the price at which competing companies could buy gasoline at the refinery, haul it to the east coast and distribute it, made the tank wagon price.

There has been a four and half to five cent advance in the Group Three refinery price since Jan. 1. There has been a four cent advance in Standard of New Jersey territory, and an even greater advance in Standard of New York territory.

Late Tank Wagon Changes

May 26.—The Texas Co. met the 2-cent gasoline advance posted by the Standard on May 25 in greater New York, bringing tank wagon to 20 cents.

May 27.—Standard Oil Co. of New York will advance gasoline 1 cent throughout its territory, including greater New York, where tank wagon price will be 21 cents. Tank wagon price in New York state and New England generally will be 22 cents, exclusive of taxes in New England states.

Territorial changes in Standard of New York territory have been: Jan. 15 up 2 cents; Jan. 24 up 1.5 cents; Jan. 31 up 1 cent; Feb. 4 up 1.5 cents; March 20 down 1 cent; May 14 up 1 cent; May 27 up 1 cent.

May 26.—Standard Oil Co. of New Jersey advanced gasoline 1 cent throughout its territory. Last previous change was 1 cent advance on May 13.

Territorial changes in New Jersey territory since Jan. 1 have been; Jan. 23 up 1 cent; Jan. 27 up 1 cent; Feb. 3 up 2 cents; March 19 down 1 cent; April 7 down 1 cent; May 13 up 1 cent; May 26 up 1 cent.

May 26.—Standard Oil Co., of Louisiana advanced gasoline 1 cent throughout its territory. Last previous change was a 1 cent advance on May 13.

Export Gasoline Advance

May 26.—Standard Oil Co. of New Jersey advanced export prices of gasoline another half cent today. Previous half cent advance was on May 21.

Crude Price Changes

May 20.—Joseph Seep Purchasing Agency advanced all eastern crudes, excepting Corning and Ragland, from 15 to 25 cents. All Pennsylvania crude was advanced 25 cents except Gaines, which advanced 15 cents. Cabell and both grades of Somerset were advanced 15 cents. New prices are: Bradford-Allegany, $3.65; Gaines, $3.30; Other Pennsylvania, $3.55; Pennsylvania grade in West Virginia, $3.50; Pennsylvania in Ohio, $3.40; Cabell, $2.20; Somerset medium, $2,30; and Somerset light, $2.45.

May 22.—Standard Oil Co. of Louisiana advanced Smackover below 24 degrees 10 cents to 80 cents per barrel. The advance was met the same day by all other major purchasers.

Marketing

Oklahoma-Kansas—Gasoline buying is heavy and prices continue upward with little U. S. Motor available under 12 cents. Kerosene is firm. Fuel stronger as result of advance in price of Smackover heavy crude. Gas oil strengthened by large purchase by Atlantic Refining Co. Lubes steady. Wax stronger.

Chicago—Gasoline continues strong. Smackover fuel higher. Gas oil and distillates quiet.

Gulf Coastal—Lubes generally steady although some prices appear firmer than a week ago.

Pennsylvania—Gasoline, viscous neutrals and steam refined stocks considerably stronger after crude price advance. Filtered and bright stocks firmer but lack strength of unfiltered stocks. Kerosene has some firm spots but prices generally unchanged. Fuel spotty. Wax scarce and firm.

New York Export—Advance of ½-cent in gasoline fails to develop buying. Kerosene is weak and ½ cent cheaper. Demand is low. Gas oil price also falls. Bunker oil demand is slow. Lubes stronger. Wax less active.

New Orleans Export—Exporters more optimistic but buying of most products is light. Only wax demand has improved.

Coming Meetings

Michigan Independent Oil Men's Assoc., Edgewater Club, St. Joseph, Mich., June 25.

Minnesota Petroleum Assoc., district meeting, Green Lake Country Club, Spicer, Minn., June 3.

North Central Ohio Oil Club, Fremont, O., June 3.

National Oil Scouts Assoc. of America, Fort Worth, Tex., June 15, 16.

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on May 16, Smackover deep pay wells broke a record with 366,450 barrels.

In the case of Smackover, however, its production from the 2,100-foot heavy oil horizon and from the light oil division brought the field total each time up to 447,000 barrels daily, or approximately 90,000 barrels more than the high mark of any earlier field in the petroleum history of the United States.

Pacific Coast Situation

With regard to the situation on the Pacific Coast, the operating head of one of the larger companies in California writes the Houston office of National Petroleum News as follows:

"California has run true to form and is producing more oil than was expected. There is no new field in sight and neither the Athens, Rosecrans, nor the Inglewood-Baldwin Hills areas will develop into major importance at this time; but the little spurts from these fields and the deep sand at Ventura have held the state output constant in spite of slow declines in other fields.

"Ventura, as you know, is a steep structure with slow expensive drilling, so that pool will never be a serious factor except as contributing to the maintenance of output when everyone was expecting a decline.

"The state output by next December probably will be around 550,000 barrels daily. At least that is my present guess and I believe we have a closer line on it than ever before." (Note—The writer's estimate is 565,000 barrels daily.)

Analysis of Shipments

In presenting a tabulation of intercoastal shipments and exports from California, which are herewith appended, the Pacific Coast executive said:

"Crude shipments averaged 125,000 barrels daily in 1924 and have dropped to an average of 50,000 barrels daily, while gasoline and distillate shipments have increased from less than 30,000 barrels daily to more than 50,000 barrels daily. As a result of this increased movement of gasoline, stocks of gasoline and tops held by California companies were drawn on in March—gasoline stocks being reduced a total of 225,000 barrels and tops 530,000 barrels. No one in California is willing to make long time contracts for crude or gasoline but, Eastern refiners do not seem anxious to buy spot at present prices."

Intercoastal Shipments and Exports from California

(Barrles of 42 Gallons Each)

		1924 Average Monthly	1925 January	1925 February	1925 March
Crude	Intercoastal	3,050,000	1,411,000	1,496,000	1,691,000
	Foreign	560,000	448,000	58,000	269,000
	Total	3,610,000	1,859,000	1,554,000	1,960,000
Gasoline and Distillates	Intercoastal	370,000	467,000	743,000	982,000
	Foreign	460,000	705,000	397,000	747,000
	Total	430,000	1,172,000	1,140,000	1,729,000
Fuel	Intercoastal	300,000	94,000	115,000	218,000
	Foreign	1,600,000	1,142,000	1,830,000	1,525,000
	Total	1,900,000	1,236,000	1,945,000	1,743,000

United Central Oil Corp. and Acewood Merge

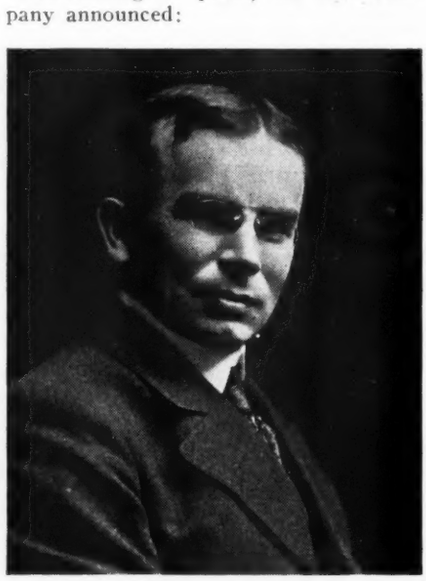
HOUSTON, May 23.—Crown Central Petroleum Corp., newly formed with A. C. Woodman as chairman of the board of directors and W. A. Williams as president, is a consolidation of the United Central Oil Corp. (formerly White Oil Corp.) and the Acewood Petroleum Co., Inc., the latter a New York marketing interest of Mr. Woodman and associates.

United Central Oil Corp., of which Mr. Williams has been president, owns the lubricant refinery on the Houston ship channel that was originally built by the old Crown Oil & Refining Co.

Announcement from New York with regard to the consolidation of these properties makes known that the new Crown Central is acquiring additional producing properties in the Mirando, Texas, field and that developed leases already operated in the southwest have gross production of approximately 4300 barrels from 308 wells.

Besides the Houston refinery, which is expected soon to resume operations, the corporation owns a plant at Clarendon, with capacity of 700 barrels daily. The Houston plant has 4000 barrels crude capacity.

Concerning its plans, the new company announced:



A. C. WOODMAN
Chairman, Board of Directors Crown Central Petroleum Co.

"The Crown Central Corporation will continue and expand its deep water terminal on the Houston Ship Channel where it is at present handling about 25,000 barrels per day of crude oil. Arrangements are being made to handle refined oil in bulk as well as crude. Using the same policies through which Mr. Woodman made the Union Petroleum Co. one of the country's largest exporters, the company will enter the refined oil market as a purchaser and exporter of petroleum products of all kinds, using its Houston terminal as an exporting base. Sales offices will be maintained at New York, Houston, San Francisco, and Paris, France."

April Stocks Report

NEW YORK, May 23.—The American Petroleum Institute, compiling reports made to it by representative oil companies, finds that pipe line and tank farm stocks of domestic crude oil were decreased 1,588,000 barrels in April. This, however, was more than offset by the increases in crude oil stocks at refineries. Reports covering about 64 per cent of the operating capacity of the United States show that stocks of domestic crude oil at refineries increased 1,803,000 barrels in April. Foreign crude oil stocks at refineries decreased 769,000 barrels.

Besides the figures given above, the following decreases occurred for the 64 per cent of the refinery operating capacity: oil for re-running, 33,000 barrels; gasoline, 296,000 barrels (increase east of Rockies of 191,000 barrels and decrease west of Rockies of 487,000 barrels); kerosene 348,000 barrels; lubricating oils, 15,000 barrels.

Increases were 1,697,000 barrels of gas and fuel oil and 321,000 barrels of miscellaneous oils. The net increase of stocks of all kinds at refineries was 2,360,000 barrels.

Posts the Tax

ROSWELL, N. M., May 25.—Continental Oil Co., whose distributing territory in the Rocky Mountain states includes New Mexico, is making sure that the buyer of gasoline knows about the 3-cent state tax.

The company uses an inexpensive metal sign displayed at all service stations of the Continental in New Mexico. The sign is so designed as to be conspicuous and at the same time neat in appearance.

Bulk Station Burns

SHREVEPORT, LA., May 21.—The bulk station of the Louisiana Oil Refining Corp., at Grayson, La., was burned May 8. A spark from a motor caused a fire while a car of gasoline was being unloaded. Besides the bulk station, a service station and restaurant were burned.

National Petroleum News

Compilation Of Mid-Continent Refinery Operations

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121 Refiners Make Biggest Draft on Gasoline so far This Year

TULSA, May 26

MID-CONTINENT refiners reported the largest reduction in gasoline stocks made so far this spring during the week ended May 22. At 121 plants with a still capacity of 444,800 barrels per day stocks were reduced roundly 3,000,000 gallons to 73,228,215 gallons. The list of refiners reporting to this publication was increased this week by one plant in north Texas which has a daily capacity of 3000 barrels.

The reduction in gasoline stocks was made in the face of an increase of 6000 barrels per day, or 2 per cent in the amount of crude and partly refined oils charged to stills. The reduction was possible because of the fact that shipments increased 3.2 per cent during the week to a new high level of 33,090,557 gallons, or nearly 5,000,000 gallons per day.

Every group of reporting refiners participated in the big movement of motor fuels. Shipments of Kansas plants were 13.8 per cent greater than production and stocks were reduced 1,000,000 gallons. Oklahoma refiners reduced their stocks roundly 600,000 gallons to 38,351,725 gallons. North and central Texas plants cut their stocks 1,000,000 gallons to a new low point of 12,501,698 gallons.

At the rate at which gasoline is moving now from refineries in the Mid-Continent fields stocks on hand represent only a very small reserve. In terms of days' supply stocks on hand May 22, would last 15 days. This is a reduction of two days since the second week in May.

Still charges were uniformly increased in all states. In Kansas 23 refiners increased their runs 3000 barrels to 81,953 barrels per day which represented 83 per cent of their rated capacity of 98,200 barrels. Oklahoma refiners increased their runs only 500 barrels per day to 112,007 barrels or 70 per cent of capacity. North and central Texas refiners were still running only 67 per cent of capacity although they increased their runs 1000 barrels per day to 90,732 barrels. Louisiana-Arkansas plants were running 78 per cent of capacity with a daily average still charge of 40,031 barrels, an increase of 2000 barrels or 5 per cent over the previous week. The entire group was running at 73 per cent of capacity.

With the exception of Kansas all groups drew on their reserve stocks of kerosene to meet the demands of their customers. Stocks at all plants were reduced 300,000 gallons to 19,517,634 gallons which represented 19 days' supply at the rate of shipment maintained during the week. Kansas refiners increased their shipments of kerosene 26.7 per cent during the week to 1,677,760 gallons but they likewise rearranged their cuts and raised their production of burning oils to 2,394,994 gallons making an increase of 700,000 gallons during the week.

Kerosene shipments increased sharply in all fields to 7,030,254 gallons, an increase of 23.6 per cent. Oklahoma kerosene stocks were cut 200,000 gallons when shipments increased 17 per cent and Texas stocks were cut 600,000 gallons when shipments increased 27.5 per cent.

Kansas refiners were able to reduce their stocks of gas and fuel oil 400,000 gallons but in all other parts of the field the steady increase in heavy oil stocks continued. In the whole field shipments were 37,770,699 gallons while production was increased slightly to 41,635,563 gallons making an increase in stocks of nearly 4,000,000 gallons. Fuel oil stocks represented 26 days' supply at all plants on May 22 based on shipments of the week ended on that date.

CHICAGO, May 24.—The Kanotex Refining Co., recently contracted with the Graver Corp., of East Chicago, Ind., for one 1000-barrel standard unit of the Jenkins cracking process, to take care of present requirements at the Arkansas City, Kan., plant.

Mid-Continent Refinery Operations Week Ended May 22 (*By Special Telegraph Service*)

	Kansas	%Change Previous Week	Oklahoma	%Change Previous Week	No. & Cent. Texas	%Change Previous Week	No. La.-Ark.	%Change Previous Week	Total	%Change Previous Week	Totals Week Ended Apr. 24
No. of Plants	23		45		39		14		121		118
Da. Still Cap. (bbl.)	98,200		159,900		135,800		50,900		444,800		434,300
Da. Av. Crude Run	63,132		97,979		76,765		36,127		274,003		270,285
Da. Av. other Oils	18,821		14,028		13,967		3,904		50,720		41,265
Da. Av. Total to Stills	91,953	+ 3.9	112,007	+ 0.5	90,732	+ 0.9	40,031	+ 5.1	324,723	+ 2.0	311,550
GASOLINE—Gallons											
Stocks May 15	19,145,306		38,969,058		13,524,669		4,599,426		76,238,459		82,085,670
Prod. 5-15 to 5-22	8,505,970	— 1.3	11,450,095	— 0.5	7,952,161	+ 0.6	2,172,087	+ 6.1	30,080,313	+ 0.04	28,819,061
Ship. 5-15 to 5-22	9,677,262	+ 7.1	12,067,428	+0.04	8,975,132	— 0.7	2,370,735	+22.0	33,090,557	+ 3.2	31,272,428
Stocks May 22	17,974,014	— 6.1	38,351,725	— 1.6	12,501,698	— 7.6	4,400,778	— 4.3	73,228,215	— 3.9	79,632,303
Ratio Sales to Prod.	113.8%		105.4%		112.9%		109.1%		110.0%		108.5%
KEROSENE—Gallons											
Stocks May 15	5,479,770		8,856,781		4,890,972		593,748		19,831,271		20,187,588
Prod. 5-15 to 5-22	2,394,994	+74.0	2,555,816	+27.6	1,426,350	—10.9	349,457	—16.0	6,726,617	+24.6	6,405,241
Ship. 5-15 to 5-22	1,677,760	+26.7	2,756,088	+17.0	2,074,239	+27.5	522,167	+37.4	7,030,254	+23.6	6,556,451
Stocks May 22	6,197,004	+13.1	8,656,509	— 2.3	4,243,083	—13.2	421,038	—29.1	19,517,634	— 1.5	20,036,378
Ratio Sales to Prod.	70.1%		107.8%		145.4%		149.4%		104.5%		102.4%
Stocks May 15	17,680,613		57,685,887		46,120,680		17,411,044		138,898,224		122,256,645
Prod. 5-15 to 5-22	9,071,447	+ 7.6	11,578,727	— 8.7	12,095,802	+ 1.7	8,889,588	+11.8	41,335,563	+ 1.7	40,281,224
Ship. 5-15 to 5-22	9,498,306	+30.8	9,420,725	—11.0	10,671,784	—19.3	8,179,884	— 1.8	37,770,699	— 4.1	35,722,328
Stocks May 22	17,253,754	— 2.4	59,843,889	+ 3.7	47,544,697	+ 3.1	18,120,748	+ 4.1	142,763,088	+ 2.8	126,815,541
Ratio Sales to Prod.	104.7%		81.4%		88.2%		92.0%		90.7%		88.7%

Natural Gas Men Elect Leonard to Head Association; Will Meet in Tulsa

By Howard Markt
N. P. N. STAFF WRITER

ATLANTIC CITY, N. J., May 22

NEXT year, along about this time, Tulsa will be host to the surging mass of folks who conduct the natural gas industry of the United States and Canada.

The decision to go to the Mid-Continent metropolis was made during the twentieth annual meeting of the Natural Gas Association of America which closed here yesterday after a well-attended four-day period during which the members listened to a number of addresses, heard many reports of committees, gossiped a vast deal and paid attention to the many animated and stationary attractions for which Atlantic City is justly famous. It is even reported that some of the delegates went swimming, although O. K. Shannon, of the Fort Worth Gas Co., was heard to draw comparisons between the swimming places at Atlantic City and Lake Worth, all in favor of the latter.

There was some comment last year among the brethren as to why Atlantic City had been chosen. It is not, so far as statistics of the U. S. Geological Survey show, located in a natural gas field and neither is it a point of large distribution. It has been decided now that it was to effect better relations with the money barons of the country. Since they would not attend the conventions of the gas association, the gas men decided to go to them and the lair of the capitalist is not Wall Street, as many suppose, but Atlantic City.

Tulsa, of course, has heard all about next year's meeting by now. It has something else to talk about, too. A. W. Leonard, vice president of the Oklahoma Natural Gas Co., was elected president of the association, being elevated, according to the custom of the association, from the vice presidency which he attained in 1924. So it will be his party when the folks gather in his home town.

A. W. LEONARD
of Tulsa, is the new president of the N. G. A. He is vice-president of the Oklahoma Natural Gas Co.

The decision to go to Tulsa was really reached a year ago when the association convened in Cleveland. At that time diplomatic representations were made by W. G., or rather, Bill Long, who made a speech with some poetry in it. In the horse trading that resulted, the plan was worked out which was followed this year. Rather a neat compliment to Mr. Leonard, at that.

Fine weather attended the convention this year and the members who had provided themselves with straw hats were enabled to realize on their investment and that student of sartorial effects, John M. Garard, of the Ohio Fuel Supply Co., gave the assembled crowd on the Boardwalk something to think about several times each day. Of course, speaking of raiment, there were many others but Mr. Garard comes to mind immediately when the subject is raised.

W. B. Way Resigns

There was some more news of considerable importance to the association. William B. Way, the urbane and animated general secretary, announced that his resignation was, with much regret, being tendered, to take effect at the convenience of the association. He will enter the services of the Columbia Gas & Electric Co. with its subsidiary, the United Fuel Gas Co., Charleston, W. Va. Harry A. Wallace, president of the natural gas association in 1923-24, is vice president and general manager of the United company. His association with Mr. Way has been close throughout the six years the latter has been with the natural gas organization; it now becomes closer. Needless to say, the regret at Mr. Way's resigning is general among the members, for his unflagging zeal for the association and for its affiliated organization, The Natural Gas Supply Men, Inc., which he also served as secretary, was in large measure responsible for the growth and interest in the association, not merely at convention time but throughout the year.

Gallagher Vice President

After electing Mr. Leonard president of the association, the members chose R. W. Gallagher, general manager of the East Ohio Gas Co., Cleveland, as vice president and elected six directors to serve two years, the board consisting of 12, half of whom go out of office each year. The directors elected this

All dressed up with some place to go. Beginning at the left, C. P. Clark of Clark Brothers Co., Olean, N. Y.; Merrill N. Davis, S. R. Dresser Mfg. Co., Bradford; H. C. Morris, Dallas Gas Co. and W. F. Miller, Dresser Co., Bradford

year are L. K. Langdon, Union Gas & Electric Co., Cincinnati; H. C. Morris, Dallas Gas Co., Dallas, Tex., and William H. Thompson, secretary Ohio Gas & Oil Men's Association, Columbus, O., all re-elected and A. W. Robertson, Equitable Gas Co., Pittsburgh; H. L. Montgomery, Empire Gas & Fuel Co., Bartlesville, Okla., and William B. Way.

Presiding with his usual directness, John B. Corrin, retiring president of the association kept the sessions strictly to the program. Mr. Corrin, who since his election last year has been made general manager of the Hope Natural Gas Co., managed for a long time to escape the presidency of the association but they wore him down in 1924 and he accepted. Once in office, he discharged his duties with the same devotion that has made him one of the foremost figures in the gas industry.

The single session each day, from 9:30 in the morning to 1 p.m. proved to be a popular arrangement, as was demonstrated by the large attendance at the meeting. Each session was broken by entertainment features.

Following the address of the president, Tuesday, S. W. Meals president of the Carnegie Natural Gas Co. read a tribute to the 16 members whose deaths were recorded during the past years.

A report on membership by the board of directors was read by Mr. Way, general secretary, showing that the membership of the association now comprised 2251, a nice growth over the last report.

A trio from Cleveland. Left, W. E. Steinwedell, Gas Machinery Co.; center, Ralph W. Gallagher, general manager, East Ohio Gas Co.; right; Martin B. Daly, president, East Ohio Gas Co.

A paper on "Proper Methods of Caring for Old Wells," by James H. Henderson of the Peoples Natural Gas Co., Pittsburgh, proved to be of intense interest and practical value, a lively discussion following. Mr. Henderson brought out the point that many of the smaller operators were still producing gas in a rather haphazard way and that a good many were indulging in bad practice in not keeping accurate well records. He discussed also water problems, the proper way of setting casing and packers as well as restoring to usefulness, old wells that had been drowned out.

The placing of shots also was taken up. He advocated the shutting of high pressure wells during the summer to carry the winter load better.

P. G. Gossler who is president of the Columbia Gas and Electric Co. of New York dwelt on "The Value of Service" stressing the points that good, substantial publicity via every legitimate channel and the sale of stock to customers would gradually react toward a much more kindly feeling toward gas companies by the public.

Tuesday with giant charts, E. O. Bennett of the U. S. Bureau of Mines, Bart-

While these men stand for quite a lot in the gas industry, no drill sergeant would stand for the way they keep step. They are past presidents of the Natural Gas Association. On the left is J. D. Creveling, Henry L. Doherty & Co., and from there on are John M. Garard, Ohio Fuel Supply Co.; H. J. Hoover, Blaine-Thompson Co., Cincinnati; L. B. Denning, Ohio Fuel Supply Co.; Martin B. Daly, East Ohio Gas Co.; Harry A. Wallace, United Fuel Gas Co.; John B. Corrin, Hope Natural Gas Co.

lesville, explained a method whereby the Bureau is able to plot the individual characteristics of wells in such way as to dispense with the need for open flow tests and a consequent saving of gas which has hitherto been wasted. Like a steam engine indicator card, these pressure-volume charts give a picture of conditions obtaining below the well-head. The novel economy plant found a ready response from members by way of a rising vote of thanks to the Bureau for its original and exhaustive work on the subject. Henry L. Doherty read an interesting paper on "House Heating and Industrial Gas" discussing the Doherty three-part rate. He further took up the matter of gas heating versus oil. Discussing artificial gas he pointed out the very small amount of energy actually converted into gas out of a ton of coal, or any other solid fuel.

Thursday's meeting was primarily given over to report of the Technical and Research committee of which H. C. Cooper is chairman. Members of this committee are E. D. Leland, T. W. Weymouth, J. D. Creveling, H. C. Hancock, F. L. Chase, T. H. Kerr, J. H. Maxon and W. B. Way. The purpose of this committee is to keep members of the Association in touch with various developments in oil and gas and appliances. Two subjects have been completed. The first dealing with gasoline testing methods and the second with relation to spacing of dimensions and specifications of iron case meters, copies having been supplied members for their "code books"—or association data book. E. D. Leland read a paper making comparisons of various gases such as natural gas, gas made from oil, water gas and producer gas. This in chart form will enable the salesman to show the customer the advantage of one fuel over another in dollars and cents.

Under H. S. Hancock a study was made of high and low pressure flows in pipe lines. A paper was read dealing with leakage and showing the enormous money waste involved. Standardization committee efforts are of a cooperative character with the American Petroleum Institute. Subjects being considered for standardization are tubular goods, tool joints, rig irons, rotary drilling equipment, rigs and derricks, boilers and storage tanks.

"Twenty Years Ago" was the subject of a paper by C. W. Sears president, the Larutan Fuel Co., Wichita, Kans., and he traced the origin of the association and the important part played by M. W. Walsh.

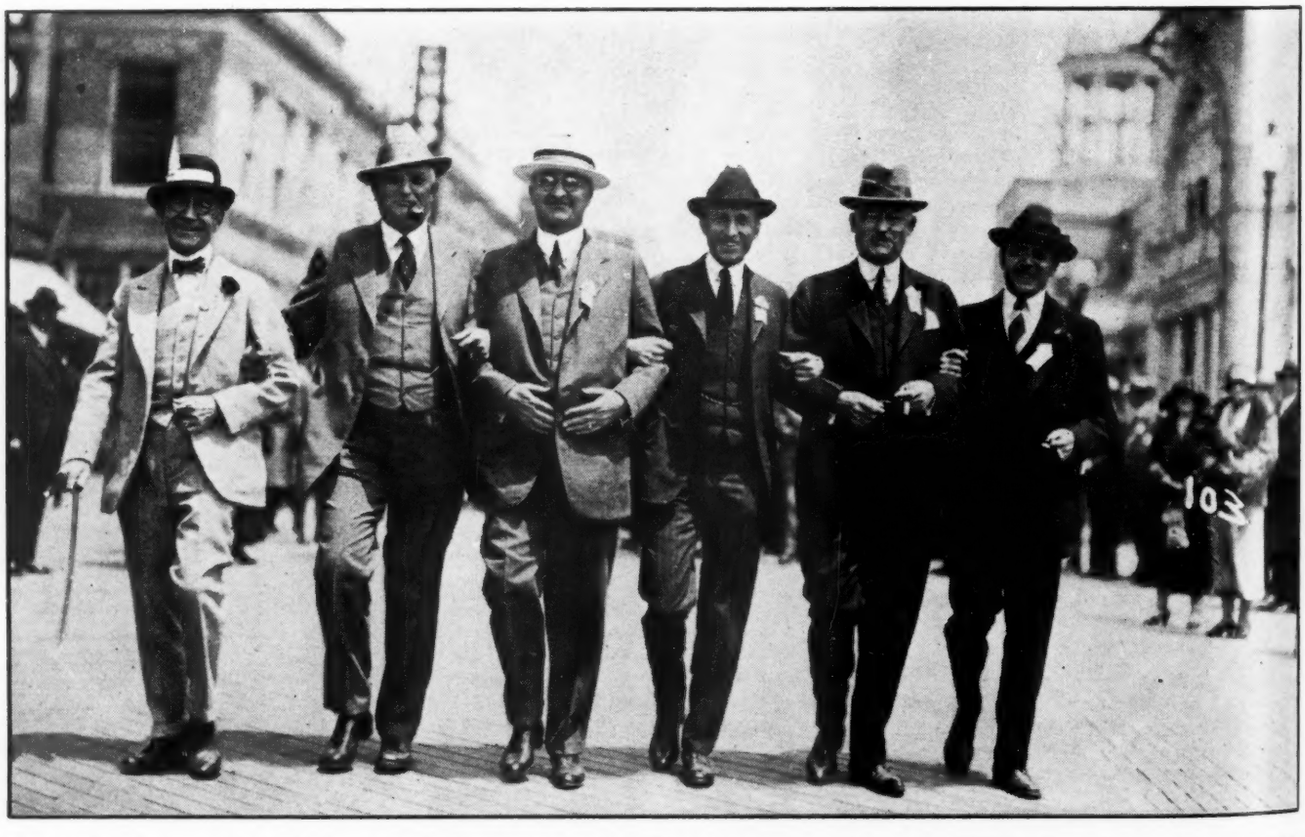
At the annual banquet Wednesday very nearly 500 covers were laid in the main dining room of the Traymore Hotel. A short program of speeches was given.

Equipment Men Exhibit Varied Line of Products for Gas Industry

ATLANTIC CITY, N. J. May 22

By far the most imposing exhibit at the natural gas meeting was that of the Worthington Pump & Machinery Corp. Its horizontal single-cylinder engine, direct-connected to a compressor excited considerable attention. This engine is of the double acting type; that is each end of the cylinder is an explosive chamber and two power impulses are delivered per two revolutions in this single cylinder, four cycle engine in comparison with one per two revolutions as is ordinarily found. Power is transmitted from piston rod to main crosshead and from there to the compressor crosshead through side rods. Valves are in cages and the complete assembly can be used either for inlets or exhausts. Compressor cylinders are of the feather valve type, provided with large cooling space. These engines are now built in 80 to 320 H. P. sizes. Representing the company were W. L. Russell manager of internal combustion sales. S. D. Jackson, southern representative at Shreveport and J. A. Lupfer manager of the Snow-Holly works at Buffalo.

Hope Engineering & Supply Co. who sets up one record in pipe line construction only to better it a few months later



This looks like one of the old time political marching clubs. Beginning at the left are Ed F. McIntyre, general manager of the Petroleum Exposition, Tulsa; A. W. Leonard, Oklahoma Natural Gas Co.; W. H. Thompson, secretary, Ohio Gas & Oil Men's Association; next man's name lost in transit; Frank L. Chase, Lone Star Gas Co., and William B. Way, general secretary, Natural Gas Association

was at the convention all ready to sign up a new contract and make a new record for speed. The manufacturing facilities of this company and its vast experience places it in an excellent position to handle pipe line construction work with expedition. It will be recalled that this company also manufactures the Hildebrand heat exchanger for gasoline plants. Shipments are going forward at a rapid rate according to W. B. Jennings, chief engineer. B. C. Hepler vice president and treasurer and Chas. L. White representative, were there for the company.

The International Derrick and Equipment Co. had a model of a 112-foot rig on exhibition, which for faithful reproduction was a gem. Galvanized, as all Ideco derricks are to make them rustproof and eliminate painting, its bright coat caught the attention of every passerby.

Lee C. Moore Co. showed a model of its Crumley patent rig foundation and disk steel bull wheels.

Harrisburg Pipe & Bending Co. showed its bull plugs and couplings. S. B. Dresser Mfg. Co. displayed several of its unions. The Pittsburgh Valve, Foundry & Machine Co. had one of its big heavy duty valves on exhibition. Garlock Packing Co. was there with samples of the many different kinds of packing made by that company. Foxboro Meter Co. showed its recording meters. Metric Metal Works featured its iron case gas meters.

Fred Thomas vice president of the C. & G. Cooper Co., Mt. Vernon, Ohio, and S. E. Johnson. sales manager explained to visitors the new Cooper gas engine-driven compressor or natural gasoline plants. Although no radical changes in design have been made very valuable improvements are noted in the new engine.

Oil Well Supply Co. showed its working model of a drilling rig and its model of a pumping rig and base. These working models are made to picture very closely the method by which hole is made and oil is pumped. A replica of the Drake well was shown.

National Supply Company devoted its space to a comfortable lounging space for friends.

Continental Supply Co. shared its space with the Titusville Iron Works. the New Bedford Cordage Co. and the Youngstown Sheet & Tube Co.

Jarecki Mfg. Co. showed some of its smaller valves and fittings.

National Tube Co. was represented by W. L. Shaffer and J. M. Denny. As usual the company had a comprehensive display of its tubular goods.

The largest valve on the floor was exhibited by the Westcott Valve Co. of Seneca Falls, N. Y. This big, imposing 16" gate valve is guaranteed to withstand a working pressure of 500 pounds per square inch and is tested at several times that pressure, thus eliminating the possibility of failure as nearly as humans can do so. Other valves exhibited were their 80"-500 lb., 10"-300 lb., 10"-500 lb. and a dozen others. Their heavy duty valves on display cover a wide range of oil field uses.

C. P. Clark explained the merits of Clark direct connected compressors for natural gasoline plants to those interested, as well as the fine points of Clark vertical multi-cylinder drilling engine.

Smackover Deep Pay Already Extends Over 6,600 Proved Acres

By Paul Wagner

N. P. N. STAFF WRITER

HOUSTON, May 23.

OUTER limits of production are yet to be established in the Smackover deep pay area, which has already broken all records for high daily average yield of an individual field in the United States.

The 2400-foot Marlbrook sand horizon, covering approximately 6600 acres of proved ground, has twice topped earlier field marks with more than 360,000 barrels daily production. Its nearest competitor was the Powell, Texas, field, which produced 356,000 barrels for a single day, Nov. 13, 1923.

Smackover's deep pay proved area was less than one-third developed on May 20, at which time 173 wells were producing 327,000 barrels daily. An additional 55 wells completed for production at the 2400-foot level were "dead" on that day, bringing the total number of deep sand wells drilled up to 228.

The extent to which future development will be pushed out from present field lines will have to be shown by additional drilling. Although the field has been delimited by failures on the east, the south and the northwest, these tests are so widely scattered that they do not prevent production lines being pushed outward at points between them.

On the northwest, the field is delimited by offsetting failures of the Houston Oil Co. of Texas and the Humble Oil & Refining Co., respectively, their No. 10 Laney, in 31-15-15, and No. 6 Flanagan, in 6-16-15.

Pure Oil Co.'s No. 1 Dumas, in 16-16-15, delimited production to the southward from the deep pay area; on the east, the No. 8 Giller test of the Phillips interests, in 10-16-15, tested 40 million cubic feet of gas and 4000 barrels of salt water two feet in sand at total depth of 2666 feet.

Even before the 2400-foot Marlbrook pay was discovered, the Smackover field probably had broken all records for areal extent of pools in the United States. The proved area then covered approximately 39,000 acres, in parts of townships 15 and 16 south of the National base line and ranges 15, 16 and 17 west of the fifth principal meridian.

Although the 2400-foot pay was discovered last November in a test of the Lion Oil & Refining Co., it was not until February that any considerable headway was made in development. Since that time production has climbed steadily, deep pay records for daily averages being set May 9, with 361,200 barrels, and May 16, with 366,450 barrels. On both days the production from the Nacatoch heavy oil pay and the west side light oil area was sufficient to bring the Smackover field as a whole to 447,000 barrels daily.

Approximately 11,250,000 barrels of oil had been recovered from deep pay wells up to May 20; actual figures as of May 13 accounted for 9,127,358 barrels.

As of May 1, last, the total production of the Smackover field from the time of its discovery at the Nacatoch level, in July 1922, had been roundly 95 million barrels. Including May production down to date, it has been in excess of 100 million barrels.

Conditions of future development considered, at both the Nacatoch and the Marlbrook levels, it is within reason to set up for the Smackover field ultimate yield estimates of as high as 300 million barrels. Many inside locations remain to be drilled for the 2100-foot heavy oil horizon and the probable extension of the 2400-foot deep pay beyond the present field lines makes certain that the current development is less than one-third finished.

Present Field Lines

Present field lines at the deep pay level extend from the No. 2 Powell well of the Standard Oil Co. of Louisiana, in 34-15-15, in a westerly direction from the northeast corner of proved territory to the No. 7 James well of A. H. Ramage, in 6-16-15, a distance of about three miles; thence south one mile to the No. 1 Berry well of the Gulf Refining Co. of Louisiana, in 7-16-15; thence southeast two and a half miles to the No. 3 Cook well of A. H. Ramage, in 16-16-15; thence northeast one and three-quarter miles to the Hollifield et al No. 10 Giller, in 11-16-15; thence north two miles to the No. 5 Alphin of Kinnebrew et al, in 3-16-15; thence one mile back to the Standard's No. 2 Powell.

The Smackover field as a whole extends 18 miles, on an airline, from southeast to northwest. The farthest northwest point of production is in 22-15-17, in the Louann light oil area; the farthest southeast point is in 23-16-15, in the heavy oil district. The field is six miles north and south at its widest points in both the heavy oil and the light oil divisions.

Pipeline runs in April amounted to 5,044,356 barrels, or an average of nearly 168,150 barrels daily.

30-Day Test of State Oil Stations Ends Political Enterprise

By Ward K. Halbert

N. P. N. STAFF WRITER

CHICAGO, May 21

THE so-called "McMaster Gas War" in South Dakota is over. With no judicial decision as to the legal right of a state to engage in competition with its citizens, it must be acknowledged that the victory belongs to the state, for it was the state that dictated the terms of the armistice when on Tuesday, May 19, oil men and civil officials met in the state-house at Pierre in a pow-wow of peace. The best of the news is that the terms of the armistice are not difficult. In substance, the agreement is this:

State owned oil stations (all combination bulk and filling stations) at Aberdeen, Brookings, Huron, Madison, Mitchell, Rapid City, Sioux Falls and Watertown will be closed as soon as their present stocks are exhausted. Hereafter the oil men's operating margin between the delivered tank car price and the retail price shall be 4 to 4½ cents.

This incident closes a political fight of two and a half years' duration, and one of the bitterest conflicts the oil men of any state were ever called upon to enter in self-defense. The battle was not fought in seclusion, for every reading American knows something about it, and it does not need an extensive review here. The end came as a result of a 30-day test launched by Governor Carl Gunderson about the middle of April, to determine the state's cost of doing business. During that month the state's stations operated as usual but were checked by an honest audit. They sold 112,720 gallons altogether.

Only six of the stations were placed on this 30-day experimental run subject to audit. They were those named above not including the ones at Sioux Falls and Rapid City. The Sioux Falls station is under control of the board of charities and corrections and was on the land of some institution near there. The Rapid City station is located in a state park and handled by the department of fish and game, so both were excluded. The other six are under the management of the highway department and all went on test.

A Political Football

Former Governor W. H. McMaster who started the state in the gasoline business is now a United States senator, and Mr. Gunderson is his successor. By bringing unfavorable light upon the oil industry during that period of unprecedented wide margins in 1923, McMaster made himself strong politically. This anti-petroleum campaign of his was sufficiently effective in South Dakota that it made the voters forget all about the scores of banks that went broke under state supervision during the McMaster administration.

When Mr. Gunderson came into office the industry was in different shape altogether. Profits in the jobbing business were unusually narrow at that time, and many officials might have pulled the state out of the oil business immediately, but it was legislative year. Every jackleg lawyer and leather-lunged radical who came to the legislature this spring came with a gasoline law already cooked up. All of them wanted to ride into something on McMaster's discarded hobby-horse.

Gunderson kept still and let the legislature sputter until it adjourned, having passed a law giving the state authority to regulate gasoline prices. Then the governor took the law the legislature left him and proceeded with characteristic Scandinavian deliberation to put it into effect. First he began to study the situation and assemble a few facts. His first move was to employ a firm of public accountants in Minneapolis to investigate the oil activities of Mr. McMaster and make a report. The report showed a general loss but a slight profit over the last year of McMaster's administration. It proved nothing. The records under McMaster's management were so generally confused and lost that a real audit was impossible.

The 30-Day Test Run

In general, the new law provides that South Dakota shall have an oil committee consisting of the governor, the attorney general and the state treasurer. Whenever a majority of this committee of three decides that profits in gasoline are too big, it can direct the highway commission to start operating the gasoline stations now owned by the state, and to build and operate others up to $100,000 of expense.

Buel F. Jones, attorney general and J. Lowell Driscoll, state treasurer, both were in office with McMaster. Neither of them are advocates of the state's right to interfere in private business. The oil men knew when the law was enacted that it would not work a hardship on them when the new govenor learned what it cost to run an oil business. So they were all glad when Mr. Gunderson announced he was going to use the stations already in operation to determine what a reasonable margin might be.

About the time the 30-day test was begun, the oil committee appointed a man to give all of his time to the gasoline business.

The man appointed was T. W. Marmon, and his first job was to supervise this test. Indeed, he may remain in office after the state stations close to keep a check on the oil business as it applies to South Dakota. It may be through Mr. Marmon that the state officials will know that oil margins do not become "unreasonably wide."

The Audit Was Fair

Accountants familiar with the oil business have examined the 30-day operations report submitted to the oil committee by Mr. Marmon, and they say it bears all the appearance of being true and correct. The only criticism to be offered on the statement is that it is O. K. as far as it goes. It is a faithful

Statement Unfair to Private Companies

While the audit of the operations of the six stations under test makes a showing that on its face is profitable to the state, it also shows clearly just how and where a state or municipality takes unfair advantage of a private commercial company whenever it goes into business. Some of the points are:

1—The state stations all have bulk storage in connection with their filling stations, hence their distributing costs are limited to unloading the gasoline from the tank car and pumping it into the customer's automobile tank, whereas in most cases the private company has to unload the car into bulk station storage and transfer it in an expensive truck to the filling station before it can be sold to the customer. This distributing cost, with the average company probably runs around 2 cents a gallon.

2—The rentals charged against all six stations is listed at $25.46 for the month Where is the privately owned station that is not paying at least twice that sum for rent or as interest on the investment in the station site?

In addition to this, farmers and others remote from towns need kerosene and gasoline delivered to their homes. The oil companies do this with tank trucks. The profits on this kind of business are not very great. Sometimes there is a loss. The oil companies assume it as part of their obligation to their customers. The state passes up all the business that it is hard to serve and takes only the cream.

statement of operations as the state operates. But on the face of it, it shows that no company with any invested capital or rents to pay could expect to compete with the state.

During the month when the test was in progress, the six state stations sold 112,720 gallons of gasoline and collected $22,637.27 for it. Besides that $1,560.97 worth of lubricating oil was sold. The voluminous statement shows that the gasoline at the refinery cost on an average of 10.15 cents per gallon and that the average freight charge was 3.93 cents. So the state's cost of gasoline delivered in tank cars averaged 14.08 cents per gallon.

The gasoline commissioner's report states that the average selling price at all the stations was 20.08 cents which shows a profit of 6 cents a gallon out of which a 3-cent tax had to be paid. In other words the state's average margin on gasoline over the month was 3 cents a gallon.

Back in the McMaster administration when the Independent oil men of South Dakota were tied up on marginal contracts and could not meet the state's prices, a margin of 3 cents a gallon would have been sufficient, because the state stations would have been getting the lion's share of the trade. Now, however, the oil men are buying on the spot market and can meet the state's price where cuts are made. Thus business has been divided well in towns where state stations were doing business.

Gallonage Not Large

Average daily sales at state oil stations were 781 gallons at Aberdeen, 300 gallons at Brookings, 504 gallons at Huron, 815 gallons at Madison, 354 gallons at Mitchell and 1002 gallons at Watertown. Oil dealers at Watertown did not meet the state's price so the state station there did over 1000 gallons a day. That was the best record made during the 30-day test and if it had not been for profits made there, oil men say the whole test would have shown a loss.

Almost immediately after the 30-day test was over the state gasoline commissioner ordered a cut in price at state stations of 1½ cents a gallon retail. That action was interpreted by newspapers to mean that the state could do business on a spread of 1½ cents instead of 3 cents. That was a misinterpretation however. Mr. Marmon's figures show that a 1½-cent spread would not be enough. For instance:

The state sold 112,720 gallons in the month; and a loss of 1½ cents on 112,720 gallons would have been $169,030 which is more than the total profits for the month. Although the authorities have not said so, the 1½-cent cut on May 19 by the state is believed to have been made to hasten closing out of stocks on hand. For if the state had sold its gasoline at today's price all during the 30-day test it would have shown a loss.

Although the oil men believe the governor was sincere in seeking for the truth about operation costs, there was a distinct effort made by station managements to make their plants show a profit during the 30 days. Not only did newspaper articles announce to the people that the life of the stations depended on their patronage during the 30-day period, but circulars were distributed at some of the stations, urging the motorists to patronize the state station well during the 30-day test, otherwise it might not continue to do business.

Most of the Independent jobbers in South Dakota have made their own tank wagon prices all this spring. State competition does not exist at all points and they have not met state competition in every case, but have made a price they knew they could justify in the eyes of a vast army of watchful politicians, followers after McMaster. The Standard Oil Co. has held its prices at normal schedule wherever it could, and met Independent competition where necessary. The formula adopted by many of the Independents was as follows:

"The Group 3 price of U. S. Motor gasoline, plus freight to destination, plus taxes, plus inspection fees, plus 4 cents equals the tank wagon price."

At some points especially the larger towns, a 4-cent spread was not considered sufficient. Most of the oil men would have been content with a 4½-cent price however. Now they believe they will be able to operate profitably at all points where there is any volume of business, for a spread of 4 cents at present spot prices is nearly enough to raise the tank wagon price to the Standard Oil Co.'s normal quotation. The Group 3 price of 12 cents on U. S. Motor gasoline, plus 4 cents freight, plus 3 cents inspection, equals 19 cents. A 4-cent profit on that makes 23 cents, which is the normal price at Pierre where the state has never had a station.

Governor Gunderson and his oil committee have not positively gone on record as to a 4 and 4½ cent margin. They have not made any margin official. But on May 19, when the Independent oil men from all over the state were present at the state house the committee voted to close the stations. A statement of the governor's to a newspaper man shortly after that hinted that 22 cents would be a fair price for gasoline in view of spot prices as he understood them.

As the interview appeared in press dispatches the terminology was garbled and the meaning uncertain, but he most likely made reference to the Group 3 costs shown in Mr. Marmon's report. In that case the margin would have been 4 to 4½ cents. Other remarks at the meeting bear out the fact that the board considers a 4 to 4½-cent spread reasonable. At least the committee recognizes that no oil man with an investment could compete with the state on a price basis.

One of the results expected from this ruling is that tank wagon and service station prices may be the same at many points in South Dakota, where even now some jobbers make no difference of price at retail, whether gasoline is sold from station or tank wagon.

Navy Seeks Bunker C Fuel Oil Bids

WASHINGTON, D. C., May 26.—The Navy department has asked for bids to be opened June 10 for furnishing 4,477,000 barrels of bunker grade C fuel oil for the year beginning July 1. Deliveries are to be 2,500,000 barrels at San Pedro, Cal., 750,000 barrels each at San Francisco and Pearl Harbor; 300,000 barrels at San Diego; and 170,000 barrels at Puget Sound, Seattle and Tacoma. The navy department also wants 186,000 barrels of Diesel engine oil at Pacific coast points.

Statement of South Dakota Stations

THE operating statement for the six state-owned oil stations in South Dakota, on a 30-day test run, showed a profit of $1,461.48 under audit. Examination of the items of expense such as heat, light, rent, water, etc., will show that any competitor who might attempt to compete with the state on a price basis would have to operate at a loss:

Total gasoline sold	$22,639.27	
Delivered cost	15,905.85	
Gross gain on gasoline		$6,733.42
State tax on gasoline	$3,381.60	
*Operating expense	1,972.32	
Shrinkage	384.13	
Total expense		5,738.05
		$ 995.37
Net profit on gasoline	$995.37	
Profit on lube oils	466.11	
Profits for six stations		$1,461.48

**The item of operating expense in the above computation is itemized below. The item of shrinkage was figured as 2,728 gallons at 14.08 cents per gallon. State tax is 3 cents. Freight is nearly 4 cents a gallon. Expense items follow:*

Salaries	$1,392.40	Postage and paper	$23.50
Demurrage		Water rent	1.00
Heat and light	12.57	Depreciation	94.35
Telephone	17.25	Exchange	8.80
Rents	25.46	Office expense	284.28
Inspection fees	112.71	TOTAL	$1,972.32

Each item of expense is a total for six stations

More Hard Roads Increase Gasoline Sales, Missouri Jobbers are Told

By J. C. Chatfield

N. P. N. STAFF WRITER

EXCELSIOR SPRINGS, May 22 ONE of the big reasons why gasoline consumption in the United States is running 30 per cent ahead of last year was revealed here at the fourth annual convention of the Missouri Oil Men's Association. B. H. Piepmeier, chief engineer of the Missouri state highway department revealed the reason in his report on road construction.

During 1924 the state of Missouri built nearly 1000 miles of primary hard surfaced roads was 125 per cent in the state had 1800 miles of all-weather roads. The increase in mileage of hard surfaced roads was 125 percent in the year. Mr. Piepmeier stated that Illinois built 1100 miles of roads last year beating Missouri slightly but that Missouri will have first place in the race in 1925.

During the first four and a half months of this year the Missouri state highway department has let contracts for the construction of 700 miles of permanent roads. Contracts are being let daily and the state promises a hard road all the way between Kansas City and St. Louis by Christmas as a part of the 1000 miles to be laid this year. The state is spending an average of $20,000 per mile on its roads.

Missouri is spending a bond issue of $60,000,000 on roads and recently began collection of 2-cent gasoline tax which with automobile license fees is expected to yield a net of $10,000,000 or more per year for actual road construction when the bond issue money shall have been entirely spent.

James Re-Elected

H. G. James of Chicago, secretary of the American Oil Men's Association, was elected president of the organization for the fifth consecutive time at the final session today. Mr. James organized the association four years ago and the jobbers insisted on re-electing him again today. Vice presidents elected were C. L. Ackert, Pierce Petroleum Corp., St. Louis; Wash Adams, Purity Oil Co., Springfield; A. A. Smith, Monark Oil Co., Kansas City; and John A. Gibson, Capitol City Oil Co., Jefferson City.

George S. Allee was re-elected secretary for another year and C. W. Elstun of the Benzo Gas Motor Fuel Co., Kansas City was selected as treasurer.

The directorate of the association was increased from 11 to 13 and the following men were elected: A. S. Land, Land Petroleum Co., Warrensburg; W. H. Smith, Red Eagle Oil Co., Macon; Walter Ware, Lubrite Sales Corp., St. Louis; George Koertell, Liberty Bell Oil Co., St. Louis; W. R. McCain. Purity Oil Co., Springfield; E. L. Martin, Manhattan Oil Co., Kansas City; H. H. Mutz, Independent Oil Co., Maryville; Bert Bertram, Missouri Oil Co., Kansas City; C. B. Hood, Joplin Oil Co., Joplin; Paul McMahan, Independent Oil Co., Seymour; D. H. Cohen, Puritan Oil Co., St. Louis; W. Morgan, Morgan Independent Oil Co., Wyconda; and H. E. Miller, Miller Oil Co., Festus.

H. G. JAMES
Secretary American Oil Men's Association

Reasons For Investigations

D. W. Moffitt, vice president of the Mid-Continent Petroleum Corp. (Cosden), made a profound impression on the jobbers with his address at the opening meeting Thursday afternoon. He gave a remarkably clear exposition of the reasons why the oil industry is always producing too little or too much oil.

There are two reasons why the oil business is perpetually being investigated by some branch of the government Mr. Moffitt said: "1. Oil and its products are great national necessities. The industry affects every individual in the country.

"2 Prices of gasoline and other oil products fluctuate widely with great rapidity."

These fluctuations in price cannot be avoided in the oil business as it is constituted at present, he explained. To do so the business would have to be completely in the hands of one tremendous company or it would have to be controlled by the government.

To prove this point Mr. Moffitt pointed out that the petroleum industry is the only industry in the world which does not know the location or extent of its reserves of undeveloped raw material. It is the only industry where the owner must develop his property whether he wants to or not if his neighbor chooses to drill.

Price raises at times when oil is being withdrawn from storage encourage wildcat drilling and bringing on subsequent floods of crude which must run their course and the only remedy is to cut the price until it is no longer profitable to produce oil. Mr. Moffitt advanced the idea that troubles of the refiner and jobber are virtually all caused by the producer who cannot produce an adequate supply of oil at all times to keep prices stable.

Mr. Moffitt did not attempt to suggest a remedy, a cure-all which would stabilize the industry if properly applied. He frankly admitted that he knew of none.

In his annual address, President James sounded a note of optimism. He predicted that gasoline will sell at 15 cents per gallon at the refinery before it will sell for 10 cents again. He said that harmony within the industry would keep down much of the unpleasant interference from outside.

Assistant Attorney General Crowder closed the afternoon program with an address on the anti-discrimination laws of Missouri which he explained in some detail.

New Gasoline Law

The new gasoline inspection law of Missouri was explained Friday morning by Asa Butler, state oil inspector. He announced that gasoline to be sold in Missouri after July 8 must meet U. S. Motor gasoline specifications with the exception of the 50 percent distillation point which may be 3 degrees higher, the 90 percent point which may be 5 degrees higher and the end point which may be 13 degrees higher. This permits the sale of 450 end point gasoline in that state if it has an initial of not over 131 degrees F.

From April 1 to Nov. 1 of each year the gasoline must have a recovery of at least 94 percent and from Nov. 1 to April 1, the recovery must be 92 percent. Mr. Butler explained the new tax law which requires every dealer as well as every jobber to register and make reports to the state whether he is the individual who remits the 2-cent tax or not. He went over details of refunds to dry cleaners, operators of farm tractors and the like who must apply for refunds within 90 days.

Tetra Ethyl Lead Sales are Suspended Until Committee Investigates

By Special Correspondent

WASHINGTON, May 21

THE one outstanding fact that came out of the conference held here in the office of U. S. Surgeon General Cumming yesterday to determine whether the use of Ethyl gasoline in automobiles is dangerous to the public, was that very little more of the stuff will be sold before Jan. 1, 1926, at the earliest.

No more of the concentrated tetraethyl lead fluid will be sold by the Ethyl Gasoline Corp. Most of the distributors of Ethyl gasoline also have suspended retail sales of the treated gasoline but there may be some retailers that will continue sales until their present stocks are exhausted.

It was the sense of the meeting, which consisted of some 75 people, that the whole question of the hazard involved in the sale of Ethyl gasoline should be turned over for investigation to a committee of seven experts to be appointed by the Surgeon General. This opinion crystallized in the adoption of the following resolution:

"It is the sense of this conference that the Surgeon General of the United States Public Health Service appoint a committee of seven recognized authorities in clinical medicine, physiology and industrial hygiene to present to him, if possible, by Jan. 1, next, a statement as to the health hazard involved in the retail distribution and general use of tetraethyl leaded gasoline motor fluid, and. . .

"That this conference indorses as wise the decision of the Tetraethyl Gasoline Corporation to discontinue temporarily the sale of ethyl gas."

Sales Suspension Voluntary

It was proposed that the resolution provide for suspension of sales of tetraethyl lead until the committee to investigate makes its report but E. W. Webb, president of the Ethyl Gasoline Corp., objected to this on the ground that it would make it appear that his company had been forced to discontinue sales when as a matter of fact, it had done so voluntarily as soon as serious fears as to the hazards of Ethyl gasoline were expressed.

So the prohibition was omitted from the resolution and the Ethyl Gasoline Corp. was commended for its voluntary suspension of sales.

The conference was attended by representatives of the Ethyl Gasoline Corp., the Standard of New Jersey, the Standard of Indiana, the du Pont interests, many universities, the Bureau of Mines, the American Automobile Association; the American Chemical Society, the American Electrochemical Society, the American Federation of Labor, the American Institute of Chemical Engineers, the American Medical Association, the American Oil Co., the American Petroleum Institute, the American Public Health Association, the Chemical Warfare Service, the city of Baltimore, Ohio state department of health, New York health department, the New York state health department, the Philadelphia department of health, State and Provincial Health Authorities, Society of Automotive Engineers, Studebaker Corp., U. S. Navy.

The city and state health authorities were an important factor in the meeting. In view of the fact that the subject of Ethyl gasoline hazard is one about which few facts are known, the men responsible for the health of their communities expressed unwillingness to take the responsibility for giving the anti-knock gasoline a clean bill of health or of condemning its sales in their jurisdictions.

Avoid Taking Responsibility

They were willing and even anxious that the public health service of the nation take over the responsibility. Surgeon General Cumming stated that his department had no authority to make an order one way or the other that would supersede state orders and it was pointed out that the health authorities have ample police powers to bar the sale of the fluid if it is detrimental to health. Whether it is or not is the decision that they hesitate to make.

The meeting from the start was marked by expressions of opinion, and some of them heated expressions, rather than the statement of facts. There was a tendency shown also at the meeting to promote a broadening of the functions of the public health service to make it include supervision of all poisonous or hazardous products, taking the power for regulating the manufacture and sale of such products away from the states.

Professor Yandell Henderson of Yale, who has been one of the most outspoken in denouncing Ethyl gasoline as a public menace, might be said to have acted as the prosecuting witness at the conference. He stated that "the whole story had not been told" about tetraethyl lead poisoning and intimated that such poisoning had occurred and the reports been suppressed by the Standard of Indiana organization.

This statement drew the fire of Dr. Morton of the Standard of Indiana who stated that the case Dr. Henderson evidently referred to was diagnosed as a nervous ailment by half a dozen doctors and that not a trace of lead poisoning was found.

Dr. Harrison E. Howe, representing the American Chemical Society challenged statements made by Dr. Henderson concerning the conduct of a laboratory for the manufacture of poison gas at Edgewood arsenal during the war.

Says It Poisons Through Skin

Dr. F. B. Flinn, of Columbia University, stated that application of Ethyl gasoline to the skin had apparently poisoned two of his assistants who were investigating the fuel, and that he himself had felt the effects. Most of the scientists and others present seemed satisfied with the solution adopted, namely appointing of the committee to investigate the health hazard thoroughly and suspension of the sale of the Ethyl gasoline until the committee's work is finished and the report in.

From the economic end, C. F. Kettering, president of the General Motors Research Corp. and an officer of the Ethyl Gasoline Corp., stated that an increase of 50 per cent in the efficiency of motors was a reasonable expectation from the general use of an anti-knock fuel through design of a new engine to use it most effectively. General distribution of Ethyl gasoline would make this possible, he said.

Frank A. Howard, Standard of New Jersey, a vice president of the Ethyl Gasoline Corp., stated that his company had used Ethyl gasoline in its cars and trucks since 1922 without any ill effects on men operating the cars or working in the garages. His company's troubles all had been in manufacturing the tetraethyl lead, he said.

W. F. Harrington of the E. I. du Pont de Nemours & Co. said his company can make and is making tetraethyl lead as safely as any other poisonous compound. He said the troubles encountered in the manufacture of tetraethyl lead have been overcome and that his company has made 1,750,000 pounds of the fluid.

From the retail distributing end, Dr. Morton stated that the Standard of Indiana had distributed Ethyl gasoline widely in 11 states for many months without a single authentic case of lead poisoning having occurred.

Dr. Henry Vaughan of Detroit, representing the American Public Health Association, expressed his opinion thus:

"Unfortunately, automobiles in Detroit kill on an average nearly one person a day. Sometimes we find a man who insists upon locking himself in a garage and inhaling monoxide. Yet we have not forbidden the use of automobiles or the construction of garages."

Industry Should Support Public Relations Work

By Warren C. Platt

EDITOR, NATIONAL PETROLEUM NEWS

A YEAR or more ago when many states and municipalities were getting into the oil business on a misapprehension of the profits and conditions in the industry, there was much loud demand, seemingly, from a good part of the oil industry, that the petroleum story be told the general public. But since the arrival of a conservative administration at Washington and the departure of most of those states and municipalities from the oil business, that demand has died down, if not even ceased. At least, this is one conclusion which can be drawn from the character of support which has been given financially to the establishment of the work of the industry's new committee on public relations, of which W. N. Davis, president of the Mid-Continent Oil & Gas Association, Tulsa, is the chairman.

The committee, it will be remembered, is constituted of officers of all the important oil associations and a slight majority appointed directly from the American Petroleum Institute. This committee last fall decided on a budget of $300,000 to be spent over three years' time and to be collected at the rate of $100,000 a year,—the subscriptions to be made by all companies interested in the oil industry,—no one company to be allowed to contribute more than $2,000. A fair response has come from the larger companies—but a very poor response has come from the smaller companies.

A year ago the smaller companies, according to all that one could observe, wanted this kind of a campaign. The officers of the American Petroleum Institute and the members of this public relations committee might be justified now in looking at the scant returns financially from the smaller companies and saying that they do not want this today.

A proper question is, are the smaller companies of the opinion that they never will need to have the industry's story, as a whole, told to the public?

This whole situation is more frankly put than the officers of either the institute or this committee would put it, but we believe that it's a good thing for the whole industry to look at this frankly.

We believe that the industry, as a whole, both big and little companies, want this public relations committee to exist and to operate, but we also appreciate that it is a common trait of human nature that when the immediate need for a thing has seemingly past, people lose interest in it. The time to organize people for a fight is when it looks as if they are being licked. When they think they are winning it is difficult to do any organization work.

And yet what the oil industry has to face is—has the oil industry won in this fight? Is the fight over? Won't we have it again and again as long as the industry maintains silence on its position?

We believe that there is a proper place in the industry's operation for such a committee as this on public relations—we believe that the committee is well organized—that it truly represents the whole industry—that it has able men on it.

We believe that there is great work for this committee to be done—first, to sell the industry within itself, and second, to go after the politicians and other liars who talk to the public falsely against the industry. We never have been particularly interested in the idea of some members of the industry and even members of the public relations committee, that the industry should immediately go out and talk to the public about its story. We don't think the public is particularly interested in the story as such.

We think the public pays attention to the oil industry only to the extent that critics direct attention to it and that the chief task of the oil industry therefore is to silence those critics. When those critics are silenced by facts, the public will reach the proper conclusion that as there's no criticism of the industry, the industry is behaving itself and operating efficiently and economically in its behalf and the public will go on about its business. We don't believe the public cares what the costs, or what the profits are in the oil industry any more than they care about the details of any other industry, providing the industry is not doing any different, is not profiting any more than any other reasonably operated industry.

The job of silencing the industry's critics, we have always believed, is a much smaller task than most people think. Out of 125 million people in this country, there are only a mere handful attacking the industry. There have been quite a number who followed the attackers. If the leaders were silenced, the followers would quit them in a minute. We think these leaders can be silenced by the oil industry making direct presentation to them of the facts immediately that the leaders seem to be getting away from the facts and also by the oil industry directly attacking these leaders with the facts before their constituents, whenever those leaders show an unwillingness to consider the facts from the industry.

The work of practically every oil association has, in the last analysis, been primarily that of the industry's relations with the public. The work of the American Petroleum Institute, Messrs Welch and Boyd, has been primarily that of public relations. All these activities have been of immense value both in educating the industry to a few facts regarding itself, and second, in handling some of the attacks on the industry, and third, in general publicity value to the public.

This paper believes that there is a distinct service which a public relations committee can fulfil particularly in focusing the public relations work as such of all these various associations. This work should be supported by everyone in the industry, big and little. It's not a Standard Oil fight—it's not an Independent fight—it's a fight for the whole industry. But every oil company should be represented as a contributor to this public relations fund, even though it's only $5.00 a year. The more popular the financial representation is, the stronger will be the committee's work.

A large number of oil companies have received letters asking for contributions from Chairman Davis of the committee. Those letters should be answered at once with a contribution. Those companies and individual oil men who did not receive such letters can today write as regards their contributions, addressing W. N. Davis, Chairman, Oil Industry's Committee on Public Relations, c/o The American Petroleum Institute, 250 Park Avenue, New York City.

The industry should bear in mind that a conservative administration at Washington today does not insure a conservative administration there tomorrow, nor necessarily a conservative administration in all of the states and municipalities in the country. The oil industry has years of bad advertising to overcome and it is going to take time and effort to do it.

Expanding Fuel Oil Market by Using Oil to Supplement Gas

By H. L. Doherty
President of Henry L. Doherty & Co.

FORTUNATELY for the artificial gas companies there are probably more than a majority of our people who would not use oil if they could buy it for half the price of any other fuel. The supply and price of oil are so erratic that it is a constant source of irritation and annoyance to all who have to make use of it. Lack of confidence in the stability and price of oil has developed wide-spread antagonism to its use and oil has no show in competition with other stable and reliable fuels for the very uses where it would command the highest price.

Oil and gas instead of being competitors ought to be allies. We have had no trouble in selling gas for househeating purposes for as much as the equivalent of 28 cents per gallon for oil. We have had no trouble selling artificial gas for industrial purposes at as much as the equivalent of 25 cents a gallon for fuel oil. On the other hand, the oil man's product does not take the higher competitive value of gas but is based on the competitive value of its product when used to displace cheap steam coals, and this condition will, in my opinion, continue to prevail until we can create the condition in the oil business where we have a dependable and reliable supply and can match our production with our consumption.

We can never sell all of our oil for what I might term superior uses, such as househeating, unless we can give an absolute assurance that oil will always be available and at reasonable prices, or that some fuel can be substituted for it at a reasonable price and without involving expense or trouble in changing from one fuel to another.

Our oil prices are now fixed by the excess as represented by the variation between supply and consumption which must be used by those who substitute oil when it is cheap and go back to some other fuel when oil is not cheap. This means in last analysis that it must be burned under boilers where the expense of the apparatus is negligible in relation to the amount of fuel that is used.

Domestic Fuel Needs

The magnitude of consumption of domestic fuel in this country is not appreciated by many people. Taking all forms of fuel used for domestic purposes and converting it on an energy basis into terms of coal it represents an annual cosumption of about 168,000,000 tons, or in terms of oil it would represent something in excess of 700,000,000 barrels, which is approximately equivalent to the entire production of crude oil in the United States.

While the price of oil is fixed by cheap steam coals, it could, if we had a reliable supply, be placed in competition with high grade domestic coal. For instance, anthracite coal in many cities is used for domestic fuel at a cost of $15 a ton and the cost of furnace attendance, removal of ash and expenses of that character, frequently amount to the equivalent of another cost of $10 a ton.

In other words, a large portion of our domestic fuel represents a cost and expenditure of, say, $25 a ton. If oil could be used in substitution for this fuel rather than in substitution for our cheap steam coals the oil value to the user would be increased more than five times. If, however, our gas businesses were permitted to adopt rational rates and rational standards we could reduce our operating costs and greatly increase our consumption, thereby reducing all our costs on a unit basis. We could also sell enough oil for househeating alone to create higher prices for oil, thus securing equilibrium between the price of oil and the price of artificial gas at some point intermediate between present prices.

We are proposing to heat houses with the use of gas to carry the load which is more or less fixed and use oil to carry our peaks. We originally planned to build two types of househeating burners, one that would use gas to heat the house down to a certain temperature and then supplement all additional heat required by the use of oil.

This burner would work out so as to give the gas companies an ideal load if universally adopted by all customers, but unfortunately we have not yet been allowed to apply the Three-Part rate universally and we have many customers who come on the line only in cold weather.

Switch from Gas to Oil

We, therefore, planned to build a second burner which would use gas through ordinary ranges of temperature to heat the house. This burner was to be controlled by both an inside and outside thermostat. The inside thermostat would maintain the house at the temperature desired, say 70 degrees, and the outside thermostat would control the nature of the fuel used, and we first planned to have the outside thermostat cut off all the gas when the outside temperature reached some predetermined point and substitute oil for the gas.

This, as you see, with the house equipped with this burner would require no gas for househeating on cold days, thus giving a lesser demand for that house which would go to take care of the supplemental and uncontrolled heating load demanded by other customers.

When we started in to develop these burners we made a list of all of the objectionable features of all of the present oil burners and started out to build a burner 100 per cent perfect. This we believe we have done.

We also strove to build a burner that would burn any oil that would flow and that could burn any kind of oil indiscriminately without any readjustment of the burner whatever. We have not suc-

Use Oil and Gas Interchangeably

H. L. DOHERTY, head of extension public utility and oil interests in the country. in his address before the Natural Gas Association convention at Atlantic City, went into further detail regarding a combination oil and gas burner developed by his engineers principally for domestic heating. First announcement of this burner was made by Mr. Doherty when speaking before a convention of oil marketers in Cleveland last fall. Since that address his companies have done additional experimental work with the burner.

Mr. Doherty's plan is to offset the peak demand which comes upon a gas company, and which demand it is often unable to meet satisfactorily, by the use of oil through a burner which switches from gas to oil at a certain demand of the individual plant. Thus the utility company could be assured of supplying its customers their required heat or power regardless of demand put upon it by extreme conditions.

In his talk at Atlantic City he described more his plan for handling the two fuels, oil and gas, by the one company than the mechanical arrangement of the burner, regarding which little as yet has been published.

He also brought out his ideas on the relative value of fuel oil as against gas, pointing out that at present a consumer will not use oil at half the cost of other fuels because of the unstable price of the oil product and his belief that the supply also is unstable.

ceeded in burning the heavier grades of oil, or in changing from one oil to another without burning a certain amount of gas with our oil, but the amount of gas required to give proper behavior from the oil is small; and while we cannot as yet promise you a burner that will make no demand on your lines on days of extremely low temperature, nevertheless, we can make this demand so small as to be unimportant.

Now by using the first burner as an example, the one which maintains a constant rate of consumption gas, I will try and show how price equilibrium between gas and oil would be secured. If you assume a charge for your demand expenses of 50 cents a cubic foot of hourly demand and a consumption charge of 50 cents per 1000 cubic feet of gas both adjusted for gases of different B.t.u. density to 1000 B.t.u. per cubic foot then the average cost of gas to the customer ranges from 55.7 cents per 1000 cubic feet for a demand used every hour in the year to $5000.05 per 1000 cubic feet if he uses his demand but one hour of the year. Making a wide range of cost and the price of oil would fix the point where it became cheaper to use oil for low load factor business rather than to pay the larger demand charge for gas.

In the tabulation which follows I have assumed that seven gallons of oil are equivalent to 1000 cubic feet of gas:

Hours Use	Load Factor Per Cent	Average cost of gas	Equivalent cost of oil per gallon
8760	100	$.5571	$.0796
7884	90	.5634	.0805
7008	80	.5713	.0816
6132	70	.5815	.0831
5256	60	.5951	.0850
4380	50	.6141	.0877
3504	40	.6427	.0918
2628	30	.6902	.0986
1752	20	.7853	.1122
876	10	1.0071	.1439
701	8	1.2133	.1733
526	6	1.4506	.2072
438	5	1.6418	.2345
350	4	1.9286	.2755
263	3	2.4011	.3430
175	2	3.3571	.4796
87.6	1	6.2077	.8868

Now taking up the second burner I have described, you are not only free from carrying the peaks of the house-heating load but your consumption drops at the time of your maximum simultaneous peak. If you figure your load factor based only on the customer's demand at the time of your peak you will find you have more than a 100 per cent load factor. In other words this business up to a large percentage of your total business will be of more value to you than a customer burning a constant amount of gas throughout every hour of the year.

Without going into the engineering details you can see how oil can be used in connection with your industrial load. If it were a practical thing to do and you could get the consent of your large industrial users you can figure out what you could afford to pay for oil if you could get your industrial customer to cut off gas and use oil whenever the temperature dropped below a certain point.

We may even find that it will pay to supply our large industrial customers with some form of industrial gas during the househeating season. In some cities you could reach the bulk of all of your industrial gas load by a duplicate set of gas mains that would not represent anything like 5 per cent of the total mains in your city. During the winter months you could supply your industrial load entirely with artificial gas or oil depending upon the relative cost and in the summer time supply this industrial load again with natural gas. With a large number of househeating burners using a combination of gas and oil you can carry either a large amount of your househeating load with gas or a large amount with oil, depending upon the price of oil or depending upon your own supply of natural gas. We could also make it possible for you to quickly readjust these burners during the heating season to take care of any unexpected changes in supply or any unexpected changes in price.

Fry and Marvel Now Under One Head

CLEVELAND, May 26.—A deal of considerable importance was consummated last week whereby the Guarantee Liquid Measure Co. of Rochester, Pa., manufacturers of the well known Fry Visible pump, purchased all of the outstanding capital stock of the Marvel Equipment Co. of Cleveland, O., the transfer of ownership being effective May 19.

"The consolidation of these two outstanding concerns, Fry, the largest makers of visible gasoline pumps, and Marvel the largest makers of lubricating and grease pumps, established the Guarantee Liquid Measure Co. as the world's foremost producer of oil and visible gasoline pump equipment," states W. S. Townsend, president of both organizations.

The Marvel Equipment will continue its operation as a separate organization. The manufacturing economies which can be effected by this amalgamation will be of immense advantage to both organizations as well as to the customers of both institutions.

The newly elected officers of the Marvel Equipment Co. are as follows: W. S. Townsend, president; A. J. Townsend, vice-president and general manager; G. D. Wolf, vice-president; J. C. Williams, vice-president; J. T. Lewis, secretary and treasurer.

J. G. Williams will continue with Marvel as active vice-president. Jordan Johnston will continue as general sales manager. William Lockhart, formerly factory superintendent, will continue in that same post, while Charles Spaeth continues as chief engineer, and C. J. Bellar remains in an important executive capacity.

The Guarantee Liquid Measure Co. has, since its inception, directed its entire energies on producing and marketing the Fry Visible gasoline pump. This highly specialized concentration has resulted from time to time in greatly reduced pump prices, prices heretofore unheard of in the oil industry.

Having pioneered visibility and introduced many new pump engineering features; being also the first pump concern to realize the great benefits which can accrue from a large advertising campaign, the Fry Visible pump was quick to enjoy large volume.

Just in the same way the Marvel Equipment Co., since its beginning has directed its entire energies to producing and marketing Marvel oil and grease pump equipment.

Thus, separately and yet in a peculiarly similar fashion, these two companies have arrived at their present position in their respective lines.

In welding the two companies together, there is no apparent necessity for changes in policy or procedure, for both Fry and Marvel have in the past been almost identical in their principles of management and marketing.

Identifying the two companies under one ownership will, however, undoubtedly be helpful to the thousands of customers of each company, who in most cases are also identical. The amalgamation of the two sales and service organizations will effect many economies, besides conserving the time of customers, who will now be able to handle all of their gasoline and oil pump equipment purchases thru one sales representative instead of two.

Also, both lines will have the advantage of one large nationally organized service department, and will be insured by a great national advertising campaign which is directed to the building of good will for the users of Fry-Marvel equipment.

CORRECTION

The May 13th issue of National Petroleum News shows an imperfection in the type of the advertisement of the Brunner Manufacturing Co. Utica, N. Y., on page 23. The sentence should have read, "The Brunner Engine Cleaner is a serviceable and economical cleaner."

Subscription Fake

READERS and subscribers of National Petroleum News are warned that fake circulation agents are soliciting new subscriptions and renewals to this publication, giving receipts of an International Publishers' Association, of Chicago, and offering oil books as premiums. This association and anyone purporting to represent it is entirely without authorization from National Petroleum News. Any reader running across these agents will confer a favor on National Petroleum News by wiring its nearest branch office.

Wisconsin Jobbers Elect Officers and Discuss Legislation

Staff Special

OSHKOSH, May 25

ELECTION of officers featured the annual convention of the Wisconsin Independent Oil Jobbers Association in Oshkosh, May 20. The attendance was unusually large at the meeting for two reasons. First, it had been advertised as an annual meeting and all the members wished to come and exercise their franchise in the election. Besides, the membership is bigger now than it has ever been, due to the efforts of the new paid secretary, R. A. Overholzer.

F. S. Mayfield, Bartles-Sheppard Oil Co., Waukesha, was chosen president for the coming year, succeeding R. H. Andrews, Pennsylvania Oil Co., of Madison, Wis. J. M. McLaughlin of the O'Neil Oil & Paint Co., Milwaukee, was made vice president and incidentally continued as head of the publicity committee of the organization.

Head of the publicity committee is quite an important post in the W. I. O. J. A., because they have an extensive mutual advertising budget for posters and newspapers as well. No secretary was elected. It was agreed that Mr. Overholzer, the employed secretary, should have the responsibility as well as the duty incumbent upon his office.

Five directors were elected. They were R. H. Andrews, Pennsylvania Oil Co., Madison, Ed. Riggs, Whiting-Riggs Oil Co., Ripon; P. D. Foster, P. D. Foster Oil Co., Beloit; Henry Stolz, Bartles-Maguire Oil Co., Milwaukee, and A. F. Podvin, Northwestern Oil Co., Superior.

A closed meeting for oil men only was held in the forenoon while the visitors inspected the town, famous for trunks, overalls and breath perfume. The main topic up for discussion at the closed meeting was General Order 23 of the Wisconsin Department of Markets, in which state authorities demand complete publicity on oil prices to all classes of trade. Most of the Wisconsin Independents are for the measure, and the rest of them consider it an experiment for the betterment of the business, at least worth trying.

D. E. Montgomery of Madison, representing the department of markets, made some public remarks on the subject and the matter was discussed rather thoroughly by jobbers afterward. That question of marketing ethics and the election consumed the forenoon.

Afternoon Session

After the jobbers and their guests had lunched together, as is their custom, in the private dining room of the Athearn Hotel, matters of general interest were taken up. First, Mr. McLaughlin of the advertising department exhibited "ad" copy to be handled by the Burns-Hall advertising agency of Milwaukee and paid for by the Independents jointly. The "ads" will begin in a few weeks now to appear in 10 Wisconsin daily papers. This daily newspaper program and the poster campaign is going to cost roughly $10,000 and does not include any of the advertising done by individual firms on their own trademarked products. It simply advertises independence and Independent oils.

Arrangements were made for Wisconsin oil men to petition the legislature for a modification of the road tax law at border towns. The Wisconsin jobbers would like an arrangement similar to the one in Arkansas. Arkansas jobbers in border cities are allowed to collect just the same gasoline tax as the stations just over the line in the other state—sometimes less but in no case more than 4 cents, the Arkansas levy.

Secretary Overholzer made a favorable report on the disposition made by the legislature of several bills which looked threatening about the time of the last meeting. The inspection law in Wisconsin has been improved rather than otherwise by the 1925 legislature. It permits inspection to continue on a gravity basis but provides that the state inspector must make a more scientific inspection whenever anybody wants a thorough test made of the gasoline they use. This is not considered bad for the oil industry, considering what legislatures have been known to do in framing inspection laws.

Next Meeting June 17

After a short discussion of the merits of several places to meet, and a vote of thanks to Erle Thompson, head of the Thompson Oil & Supply Co., Oshkosh, for the entertainment he had arranged for the association here, the convention voted to hold the next monthly meeting, on June 17 at Wisconsin Rapids, near the center of the state. It is reported as a small town with four railroads and good hotel facilities.

Mr. Overholzer stated during the afternoon session that the membership of the Wisconsin group had increased 30 per cent in the last 60 days, and to prove it he had several new members stand up for introduction. Sam Hunt of Chicago, advertising manager of the Independent Oil Men of America, delivered a short address on the advertising program of the National Petroleum Marketers Association.

Prince Edward Island May get Oil Test

Staff Special

NEW YORK, May 25.—The Province of Prince Edward Island in Canada, discovered in 1534 by Jacques Cartier, and which embraces the island of the same name and adjacent islands, has been leased on option by Henry L. Doherty & Co. to prospect for oil, according to an announcement made by the Doherty organization today.

Six of the leading geologists of the petroleum division of the Doherty organizations have left New York for Charlottetown (Prince Edward Island) to go over the approximate 1,400,000 acres of property which the Cities Service interests have the option of drilling for oil. These men will make a survey of the likeliest districts on the island which will probably be preliminary to a drilling campaign, if indications point to oil in commercial quantities. Valentin R. Garfias, head of the foreign oil department, will maintain offices in Charlottetown.

Prince Edward Island has a somewhat romantic background. It was originally sighted by Jacques Cartier in 1534, but he made the mistake of thinking it was a part of the mainland, and it was not until succeeding explorers discovered his error that it was named the Island of St. Jean, by which it was known until about 1798 when it was given its present name as a compliment to the Duke of Kent who was then the commander of all the British Forces in North America. In 1603, Champlain took possession of the island for France and early attempts to colonize it were unsuccessful.

The island lies in a picturesque setting in the half circle of the Bay of St. Lawrence and is separated from the mainland by Northumberland Strait which varies in width from nine to thirty miles. It lies comparatively close to the sea, with 500 feet being its maximum elevation. The island is 145 miles long and 34 miles wide at its greatest breadth; the chief pursuit of its population, which is in the neighborhood of 110,000, is agriculture. The population is composed mainly of British, with a scattering of French Acadians and American Loyalists. It is on this island that the survivors of the famous Mic-Mac tribe of Indians remain. Among its principal cities are Charlottetown, Murray Harbor, Georgetown, Wiltshire and Cape Traverse.

In a general way the geological and structural conditions of the island are similar to those in the Mid-Continent fields; while at Moncton in the neighboring mainland natural gas and oil have been produced on a small scale for a number of years. To the north, Dome oil has been produced at Gaspe, province of Quebec.

The option to lease for the purpose of exploring and subsequent drilling for petroleum was obtaind from Hugh J. Mackay, of Sapulpa, Oklahoma, who has a license granted him by the Legislative Assembly of the Province of Prince Edward Island.

Crude Production by Districts

OKLAHOMA

	May 23	May 16
Cushing	22,250	22,250
Yale	6,900	6,900
Jennings	3,200	3,700
Garber, Billings	9,950	9,900
Tonkawa	59,500	61,000
Blackwell	6,150	5,200
North Okmulgee	15,900	15,800
Burbank, Osage county	57,150	56,250
Osage, outside Burbank	31,600	31,300
Healdton	15,400	15,450
Hewitt	15,300	15,400
Duncan	6,450	6,350
Lyons, Deaner	4,450	4,450
Bristow	35,150	34,950
Wewoka	14,700	14,350
Cromwell	41,600	40,400
Graham	10,650	10,100
Stroud	3,100	3,250
Watchorn	4,650	4,900
Papoose	23,100	24,500
Fox	4,150	.....
Other fields	56,800	58,550
Total	448,100	444,700
Increase		3,400

KANSAS

	May 23	May 16
Eldorado, Towanda	14,150	13,900
Augusta, Fox Bush	5,900	5,950
Peabody, Elbing	5,300	5,350
Rainbow Bend	19,750	19,150
Florence, Covert	2,150	2,150
Other fields	54,800	53,650
Total	102,050	100,150
Increase		1,900

NORTH LOUISIANA

	May 23	May 16
Homer	7,800	6,750
Haynesville	13,900	13,800
Caddo, light	9,600	9,700
Caddo, heavy	2,650	2,400
De Soto, Red River	4,250	4,200
Elm Grove	700	800
Bellevue	3,350	3,500
Cotton Valley	10,700	10,800
Total	53,150	51,950
Increase		1,200

ARKANSAS

	May 23	May 16
El Dorado	9,050	9,150
Smackover, light	29,750	29,800
Smackover, heavy	389,300	406,550
Stephens	1,850	1,900
Nevada	1,450	1,450
Total	431,400	448,800
Decrease		17,400

ROCKY MOUNTAIN

Wyoming

	May 23	May 16
Salt Creek	54,460	56,110
Teapot	1,710	1,575
Big Muddy	3,245	3,320
Grass Creek	4,615	4,500
Elk Basin	980	945
Greybull, etc.	125	150
Rock River	3,280	3,180
Lance Creek	475	510
Poison Spider	600	245
Osage	400	390
Hamilton Dome	725	800
Mule Creek	1,070	1,275
Lander	375	360
Lost Soldier	5,100	5,090
Ferris	85	80
Total Wyoming	77,245	78,530

Colorado

Craig	700	760
Fort Collins	1,035	1,040
Boulder	30	25
Florence	245	240
Rangely	100	110
Tow Creek	85	130
Total Colorado	2,195	2,305

Montana

Cat Creek	3,500	3,085
Kevin-Sunburst	6,500	3,800
Total Montana	10,000	6,885

New Mexico

Artesia	1,085	1,140
Rattlesnake	465	425
Hogback	500	515
Total New Mexico	2,050	2,080

Recapitulation

Wyoming	77,245	78,530
Colorado	2,195	2,305
Montana	10,000	6,885
New Mexico	2,050	2,080
Miscellaneous	200	200
Total	91,690	90,000
Increase		1,690

CALIFORNIA

	May 23	May 16
Santa Fe Springs	52,000	52,000
Long Beach	112,000	112,000
Huntington Beach	43,000	43,000
Torrance	36,000	36,000
Dominguez	37,000	39,500
Rosecrans	24,000	19,000
Inglewood	23,500	13,000
Rest of State	288,000	288,000
Total	615,500	602,500
Increase		13,000

Crude Production Summary

Eastern	104,000	103,500
Total	2,305,430	2,293,695
Increase		11,735

TEXAS AND COASTAL LOUISIANA

	May 23	May 16
Mexia, Currie, Richland	27,710	27,810
Corsicana, Powell	49,700	49,730
Wortham	48,600	53,600
Wichita Falls district	84,255	85,375
Ranger, lime	28,750	28,705
Ranger, sand*	23,840	22,350
W. Texas: Mitchell, Reagan, and Scurry counties	34,905	30,975
Panhandle	3,700	3,515
San Antonio, Luling and Mirando	52,620	49,850
Coastal Texas	97,700	92,310
Coastal Louisiana	7,760	7,955
Total	459,540	452,095
Increase		7,445

*Includes Young, Shackelord, Brown, Coleman, Callahan, Palo Pinto and Jack counties.

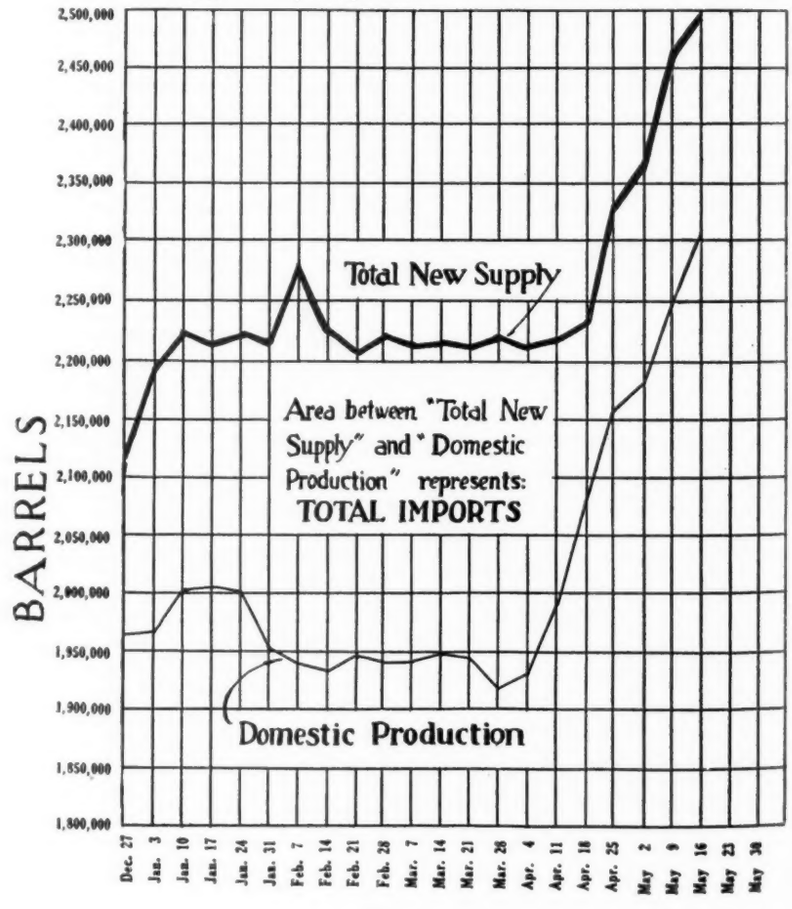
Visit in Southwest

HOUSTON, May 21.—President S. B. Bechtel of S. F. Bowser & Co., Inc., has returned to Fort Wayne headquarters, and R. R. Safford, southwestern manager, has gone back to Dallas after a visit to a number of points in southwestern territory. They visited in Houston, May 19, with Tom Warner, who is in charge of the Houston territory.

Messrs. Bechtel and Safford reached Houston from San Antonio, after which New Orleans was the next stop. While in Houston, they were taken down the ship channel by Mr. Warner for an inspection.

Daily Average Crude Oil Production and Imports

(Figures Compiled by American Petroleum Institute)



Among the Producers

ST. LOUIS, May 23.—Capt. B. O. Mahaffy, vice-president and general manager of the Silurian Oil Co., one of the substantial operating companies of the Mid-Continent, will address the graduating class of the Rolla, Mo., School of Mines. He will speak on the development and practices of the oil industry.

* * *

ST. LOUIS, May 23. — H. A. Wheeler, petroleum engineer and manager of the Petro Oil Co., spent a week investigating the new fields of Colorado. He regards some of the development as very promising.

* * *

CASPER, WYO.—James Finch has been appointed superintendent in the Salt Creek field for the Marine Oil Co., succeeding Frank Woodbeck who resigned to become superintendent for the Carter Oil Co. in Salt Creek. Mr. Finch has been with the Marine Oil Co. for about four years.

* * *

SHREVEPORT.—C. H. Dane, of the U. S. Geological Survey, fuel section, is in Shreveport, preparing structure contour maps of a number of the oil fields in northern and southern Louisiana. The work is being done in connection with government ownership of land in these fields.

* * *

TULSA.—T. J. Ryder, president, and E. L. De Golyer, vice-president and general manager, of the New York office of the Amerada Petroleum Corp., have spent several days this week in the company's Tulsa office. From here they will go to Houston, where the Rycade Oil Co., an Amerada subsidiary, has its general offices. Mr. De Golyer recently was made Honorary Doctor of Science by the Colorado School of Mines, following his address to the graduating class there.

* * *

TULSA.—S. R. Clawson, for some time past sales manager here for the Continental Supply Co., has resigned. He has not announced his future plans, except that he is glad of the opportunity to take a vacation.

* * *

HOUSTON.—Friends in Houston have been informed of the death of "Bill" Reid, one of the owners of the Petroleum Equipment Co., Los Angeles, after an operation. Mr. Reid's death came as a surprise as his general health had been regarded as good.

* * *

ST. LOUIS.—Arthur Thompson, formerly assistant to the vice-president of the Continental Supply Co., has resigned, and is moving to Tulsa, where he will be general sales manager for the International Supply Co.

WICHITA FALLS.—Several geologists have recently moved to this city to practice their profession and take part in the development work now going on in this territory. W. C. Thompson is in charge of geological work here for the Sun Co., and has offices in the Bob Waggoner building. C. M. Sale, formerly with Marland, is doing geological work here for the New England Oil & Pipe Line Co. L. E. Trout, formerly consulting geologist of Oklahoma City, is now here as geologist for Knight & Knight, with offices in the Staley building. E. F. Bullard, of the geological staff of the Dixie Oil Co., Inc., is now stationed here. Burton Hartley, consulting geologist, of New York, is here temporarily, on professional work in this vicinity.

* * *

TULSA.—Dr. Edward Bloesch, consulting geologist and engineer, will spend the summer in Switzerland, and will sail from New York, June 5. Dr. Bloesch is a recognized authority on oil mining.

* * *

TULSA.—James M. Douglas, geologist for the Union Oil Co. of California in the Fort Collins, Colo. district, was in Tulsa last week. In this connection, it is reported that the Union has opened an office at Shawnee, Okla., and has a party of geologists working in that area. This marks the beginning of the company's operations in the Mid-Continent field, and may be the forerunner of an aggressive campaign to acquire leases and production.

* * *

BARTLESVILLE.—John K. Knox has joined the geological staff of the Phillips Petroleum Co., with headquarters in this city. He succeeds H. M. Scott, who resigned May 1 and has returned to Tulsa to re-enter consulting geological work.

* * *

TULSA.—E. L. De Golyer, president of the American Association of Petroleum Geologists, announced while here that the next annual meeting of the association would be held in Dallas, in March, 1926.

* * *

CASPER, WYO. — George G. Perdunn, who has been with the Illinois Pipe Line Co. for the past 18 years, has been made general superintendent for the Rocky Mountain division, succeeding Thomas Kinney who resigned several weeks ago.

* * *

TULSA.—John W. Merritt, consulting geologist, is in southeastern New Mexico on professional work which will keep him in the field several weeks.

TULSA.—John Moran, formerly with the sales department of the International Supply Co., has resigned, and has gone into business for himself. He has been made representative for a line of oil field specialities, and will distribute them in the Mid-Continent.

* * *

SHREVEPORT.—All geoogists are invited to attend the meeting of the Shreveport Geological Society, June 13 and 14. A field trip will be made with the purpose of examining outcrops of the lower Cretaceous, near White Cliff, Ark.

* * *

WICHITA FALLS.—Walter Burress, geologist, who was with the Marland organization for five years, is now with the Independent Oil & Gas Co., and has been stationed here, where he will have charge of that company's geological work in Texas.

* * *

TULSA.—L. R. Brammer, formerly district sales manager for the Waite Phillips Co. at Kansas City, has been made sales manager at Tulsa in the tank car sales department.

Tank car sales from Kansas City offices are being handled under the direction of Fred W. Cordell, district superintendent. Kansas City offices are at 600 Orear-Leslie Building.

* * *

TULSA.—Following resignation of W. G. Long from the Robinson Packer Co., E. T. Tucker, formerly secretary, was elected vice-president and secretary. H. D. Parker, of Coffeyville, was elected general manager. O. K. Eysenbach, of Tulsa, remains as president, A. H. Craver is treasurer, and H. R. Vreeland is assistant treasurer. H. L. Kime has been added to the board of directors.

* * *

TULSA.—A. H. Garner, consulting geologist, of the firm of Brokaw, Dixon, Garner & McKee, New York, has been in Tulsa the past week on business.

* * *

TULSA.—C. E. Hane, formerly vice-president, and E. W. McCrary, formerly chief geologist, of the Tidal Oil Co., have formed a partnership for the general practice of oil production, and have opened offices in the Mid-Continent building here.

* * *

Tank Builder Dies

HOUSTON, May 21.—Pat J. Moran, 44, of El Dorado, Ark., vice-president of the Cypress Tank Co., Inc., Shreveport, is dead here after an illness of about a week. The body was sent to Shreveport for burial. Besides a widow at El Dorado, and his mother and father in Ireland, Mr. Moran is survived by six brothers: Tom and Mike of Oil City, La., four others in Ireland, and a sister, Mrs. Ed Daugherty, of El Dorado. M. A. Stanton, head of the Cypress Tank Co., at Shreveport, was with Mr. Moran when he died.

South Dayton Salt Dome Again Nearing 30,000 Barrels

Staff Special

HOUSTON, May 23.—The South Dayton salt dome, near the town of Liberty, had come into its own again this week for important Gulf Coastal lubricant crude production.

Completions of the Sinclair Oil & Gas Co., and the Associated Oil Co., roughly a half mile south of original production, had carried development into new territory on the east flank of the dome and had brought up daily average yields to nearly 30,000 barrels again.

Sinclair Oil & Gas Co. completed its No. 1 Condit fee at 3595 feet for 2500 barrels, initial production, the well settling to 2100 barrels daily at the end of the week; Associated Oil Co.'s well, located about 125 feet north of east of the Sinclair completion, came in at 3650 feet for initial production of 2500 barrels daily, May 20, but sanded up. It will be put on production again after recompleting.

These wells are about 1200 feet south of the Gulf Production Co.'s No. 1 Antoine, recently completed for 1600 barrels initial production at 3559 feet, and The Texas Co.'s No. 1 Simms fee, which came in for 1000 barrels at 3622 feet. The wells of the Gulf and Texas companies are about 500 feet from the Gulf's Vandeventer, which extended original production about 1800 feet south from the first wells drilled on the northeast flank of the dome.

Except for narrow strips operated by the Associated and Sinclair in the area of most recent development, virtually all the acreage is in the hands of the Gulf. It is probable that development on this part of the dome will be carried forward more slowly than it was on the northeast flank, where many small pieces of acreage were drilled by a larger number of companies.

Excluding the Sinclair and Associated wells, since completed, production on the South Dayton dome (South Liberty field), May 20, was as follows:

Production by Companies

	Per cent B.S. & W.	Bbls. Oil
J. S. Abercrombie,		
Harrison, 3		1089
M. J. Bashara, Pickett 1		150
Mills Bennett, Pickett 1		263
Pickett 1 to 3 and 5 to 9	30	1174
Gulf Production Co.		
Vandeventer 1	48	297
Mecom-Spear 1		10
Antoine 1		1449
Hamman 1 and 2		179
Richardson 1		598
Shade fee 1 to 5	26	1015
Williams 1 and 2	20	395
Humble Oil & Refining Co.		
Rivierre B-2		8
Shade fee 1, 2 and 4	8	1024
Harrison-Pickett 1 and 2	6	46
Pickett B-1 and B-4	10	852
Pickett A-2		421
Pickett C-1, 2 and 5		1007
Chambers A-2 to 4		963
Chambers B-1		181
Hamcze A-1		221
Oxford Oil Co.,		
Harrison 2 to 6 and 8	10	3688
Peer Oil Co., Harrison 1 to 5	2.4	3621
Frank Long, Andrews 1	80	85
Sun Oil Co.,		
Shade fee 1 to 6 and 9		2248
(No. 2	15)	
(No. 3	14)	
(No. 4	25)	
(No. 6	40)	
The Texas Co.		
Simms fee 1 and 2		1762
Vacuum Oil Co.,		
Barrett 1 to 7 and 9		2835
Total		25,581

Leases on Shoshone Lands to be Sold

WASHINGTON, May 26.—Sale of oil and gas leases on approximately 45,000 acres of ceded and tribal lands in the Shoshone Indian Reservation in Wyoming has been authorized by the Secretary of the Interior.

The leases will be offered at a public auction to be held July 9, 1925, at the headquarters of the Shoshone agency at Fort Washakie, Wyoming, covering specific tracts to persons paying the highest cash bonus per acre.

In addition to the bonus, the successful bidders must pay a royalty to the Indians of 12½ per cent on all the oil and gas produced on the ceded lands and an advance royalty of $1 per acre every year. The leases on these lands will run 20 years with a preferential right of renewal in periods of 10 years each.

On leases sold on the tribal lands besides the bonus, the regulations provide that the successful bidders shall pay advance royalty payments ranging from 15 cents per acre for the first year to 75 cents per acre for the fifth year to the Shoshone Indians as well as royalties on all oil produced ranging from 12½ to 25 per cent depending on the quantity and grade of the oil.

Receipts including both bonuses and royalties will go into the tribal fund to the credit of the Shoshone Indians.

Sell Ark. Properties to Ohio Oil Co.

EL DORADO, May 23.—It is reported here that the Forrest Oil Co. has sold all of its Arkansas properties to the Ohio Oil Company for a consideration of $1,200,000.00 in cash. The Forrest Oil Co. owns about 560 acres of productive property in the Smackover district; and has a settled production of around 2000 barrels of light oil and 400 barrels of heavy oil per day. It is said that a total of 1700 acres of wildcat leases also was included in the deal.

It also is reported that the Unity Petroleum Co. has purchased from Murdock et al a tract of 30 acres located in the SW¼ NE¼ of section 8-16-15, Smackover heavy oil district, including three deep wells now making around 15,000 barrels of oil per day. A consideration of $400,000, half cash and half out of oil, has been mentioned in this connection.

Lion Builds 25-Car Rack in Smackover Field

HOUSTON, May 23.—Lion Oil & Refining Co., which operates producing properties in the Smackover field and a cracking plant refinery at El Dorado, Ark., is building a 25-car loading rack for tank car shipments of crude on its T. D. Murphy lease, in 8-16-15.

Reports from El Dorado say the Lion has purchased 100,000 barrels of Smackover crude from the H. L. Dail interests at 50 cents a barrel, the Lion to take any oil testing up to 10 per cent b.s. The deal was made before the last two advances in Smackover crude, which brought heavy oil up to 80 cents a barrel at the well.

Another sale prior to these price advances was made by Clark & Greer to Winship et al of New Orleans, who paid 60 cents a barrel for 100,000 barrels. Natural Gas & Petroleum Corp. sold the Missouri Pacific railroad 150,000 barrels at 10 cents above the Standard's posted price and Roxana Petroleum Corp. paid Murdock et al a similar premium for 100,000 barrels.

Kansas Geologists Will Collect Well Logs

WICHITA KANS., May 23.—The Kansas Geological Society will hold monthly meetings this summer instead or semi-monthly sessions as it did last fall and winter. The May meeting, held today, was addressed by W. L. Ainsworth on subsurface geology of the Augusta district.

Members of the society have undertaken to collect all available logs of wells that have been drilled in the state. On account of the state geological survey not having sufficient funds to do this work, this professional society is attempting to get together a great deal of this information, not now available to geologist and operators. The committee of the society which has the work in hand consists of Amil A. Anderson, George A. Forrester, F. G. Holl, Marvin Lee and Charles E. Straub.

It is not expected that anyone will contribute logs which are confidential or those which the holding for a while would benefit an operator, but there are many which can be gotten in if the work of collection is pushed hard. A great deal of information which has been scattered over the state for years will thus be centralized and perhaps an office can be opened for the distribution of sets of old logs and the collection and distribution of new ones.

Another Wilcox Sand Discovery in Kay; New Field North of Cromwell

By A. F. Hinton
N. P. N. STAFF WRITER

TULSA, May 23.

THE past week was marked by several interesting developments, all of which tended to provide an answer to the oft-repeated query as to where Oklahoma's new production is to come from during the next few months. Extensions of older fields and discoveries of what may become important new ones have become increasingly frequent during the past week or two, until it now seems probable that there will be considerable new oil available in a comparatively short time.

Whether any of these newly-discovered fields will develop into market-breaking proportions of course cannot be foretold with accuracy from a one-well standpoint, but when one considers the Tonkawas and Cromwells of the past, it is easy to visualize fields of similar area and productivity resulting from these discoveries.

Although not a development strictly of the past week, probably the most important discovery of recent days was that in the so-called Thomas field of northwestern Kay county, where the Marland Oil Co. has a well making around 1500 barrels in the Wilcox sand, in virgin territory and with nothing now known to prevent it from becoming another Tonkawa.

Another interesting development of the week was the finding of big production in a well three miles north of Cromwell, but evidently in another pool, and not an extension of that erratic field. This well provided a sensation for several days until it went to water and then suddenly went dead. In spite of its sudden demise, however, it produced such large quantities of oil while it was alive as to assure the existence of a field somewhere in the vicinity, and to insure a thorough testing of surrounding acreage.

Still another discovery was that adjacent to the townsite of Braman, also in northwest Kay county, and four miles south of the producing field of that name. This well marks the discovery of another of the numerous pools being developed in that general area, and marks, therefore, another potential Wilcox sand development when drilling has been carried deep enough to exploit that horizon. With the recent northwest extension of the Tonkawa deep sand area, which has resulted in the starting up of a large number of new wells, the development at Garber, where 35 wells are drilling for the Wilcox, discovered by the Sinclair Oil & Gas Co. early in April, and the new Thomas production, prospects are for a busy summer in northwestern Oklahoma.

The discovery of the Wilcox sand in the Thomas field came about when the Marland Oil Co. drilled in its No. 2 Thomas, in the SEc W½ SW of 15-25-2W, getting the sand at 3955 feet. It has been drilled to 4030 feet or 75 feet in the sand, and is flowing now about 1475 barrels daily. It will probably be drilled deeper and shot, and it is likely that its production then will be much greater than it is at present. The well got the Wilcox nearly 500 feet higher than it had been looked for, according to Marland officials, indicating the existence of a very large structure on that horizon.

Oil from this well tests 41.9 degrees gravity, having the high gravity characteristic of all crudes found in this part of the state. Previous to the Wilcox sand discovery, three medium-sized wells had been completed in the field by the Marland, Carter, and Twin State companies, in sand found at about 2050 feet. The best of these wells made only about 350 barrels initial. The structure at this point was mapped by the use of core drills by the Marland interests, and as a result, those interests have leases on most of the desirable acreage in the vicinity. Carter Oil Co., however, has two pieces near the well, including an 80-acre lease offsetting the well to the east. The Twin State Oil Co. has 120 acres in section 22, offsetting the well to the south. Gypsy Oil Co. has 160 acres a quarter-mile east of the well. Acreage held by other companies is all more remote from the discovery well than those mentioned.

About a dozen wells already have started up, or are making preparations to do so, in the Thomas field, all of them intending to go to the Wilcox sand. It will probably require 75 days to complete a well to that horizon, so that this crop of wells may be expected in along about Aug. 15 next. The Twin State is starting up a south offset, in the NEc NW NW of 22-25-2W, and the Carter is starting an east offset in the SWc SE SW of 15-25-2W. Prairie Oil & Gas Co. has made a location in the NEc SE of 21, a half-mile south and a quarter west of the discovery well, and Marland will offset to the east, in the NWc SW of 22.

Selby Oil & Gas Co. will drill in the SWc NE of 15, a quarter-mile east and a half north of the discovery, and the Gypsy is starting one in the SWc SE of 15, east across and eighty from the well. Cosden has a location in the SEc NE of 16, a half-mile north and a quarter west of the No. 2 Thomas. Deep tests will undoubtedly be drilled at the three shallow wells already completed, and also at the dry hole in the Sec of 16, which was abandoned at 2252 feet.

Well North of Cromwell Dies

Great excitement hereabouts ensued when Fisher, Holm, Jarvis and Carter Oil Co. drilled in their No. 1 Lena, in the SEc NE of 15-11-8, three miles north of production in the Cromwell field, in Seminole county, and adjacent to the line between that county and Okfuskee. This well blew in with a rush when it had been drilled only on foot in a sand

Drilling Operations in Oklahoma, Kansas and N. Texas

	May 23 — Week Ending — May 16									
	Loc.	Rigs	Drg.	S.D.	Total	Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank	8	3	38	...	49	8	3	38	0	49
Other Osage	15	23	73	12	123	15	23	73	12	123
Bristow-Cushing	9	35	127	30	201	11	33	131	30	20
North Oklahoma	10	34	113	50	207	10	36	109	53	208
South Oklahoma	12	13	134	61	220	9	15	127	62	213
Muskogee	...	16	31	16	63	...	13	28	20	61
Okmulgee-Bristow	3	64	139	27	233	3	61	143	27	234
Tonkawa	1	13	18	13	45	...	4	21	12	37
Wewoka-Cromwell	14	32	215	22	283	12	30	218	25	285
Total Oklahoma	72	233	888	231	1424	68	218	888	241	1415
KANSAS	86	80	305	129	600	83	77	337	122	619
NORTH TEXAS										
Eastland County	...	1	20	12	33	...	1	23	10	34
Stephens County	...	25	37	23	85	...	22	33	23	78
Texas Panhandle	...	19	26	11	56	...	16	30	10	56
Mexia District	...	26	29	9	64	...	19	31	6	56
E. Texas Wildcats	...	7	10	20	37	...	7	11	21	39
W. Texas Wildcats	...	28	91	74	193	...	23	115	81	219
Wichita Falls	...	62	152	42	256	...	54	141	91	286
Total N. Texas	...	168	365	191	724	...	142	384	242	768
GRAND TOTAL	158	481	1558	551	2748	151	437	1609	605	2802

The Cross Cracking Process

Cross cracking units having a combined rated throughput capacity of 44,000 Barrels per day on stream have been sold during the past few months and are now under construction.

The M. W. Kellogg Co.

90 West St.
New York City

Branch Offices:

700 Baltimore Ave., Kansas City, Mo.
2929 Harrison St., San Francisco, Cal.
304 Lane Mortgage Bldg., Los Angeles, Cal.

topped at 3529 feet, and started off flowing at the rate of 75 to 100 barrels an hour.

Taking the difference in surface elevations into consideration, this well apparently is about 61 feet below the water level in the Cromwell field, so that it was not surprising when it started making some water after only one hour's flow. The oil is said to have shown a temperature of about 110 degrees F. and to have a strong salty taste, even before any water in it was perceptible. Both these indications, of course, point toward the probability of water. The water increased rapidly after it started cutting the oil until finally it drowned out the oil altogether two days after the well was drilled in. The well then stopped flowing altogether and has been dead since, except for one short flow today.

Completions in Oklahoma and Kansas Week Ended May 23

OKLAHOMA

Caddo County

Company	Well No.	Location	Depth	Initial Production
Briscoe-Hall	4	NWc NE NE 6-5-9W	1885–2385	50

Carter County

Company	Well No.	Location	Depth	Initial Production
Schermerhorn	2	C SW SE SE 8-3-2W	2437–2522	45
Humble	1	C NE NE SW 28-1-3W	T.D.3452	Dry

Creek County

Company	Well No.	Location	Depth	Initial Production
Lima	4	NW NE NW 2-18-5E	2763–2779	17M
Olean	4	SEc NW SW 32-17-8E	3437–3469	1180
Laurel	9	C NE SW 22-16-8E	3113–3116	80
Gypsy	3	NWc SW SE 2-14-8E	2472–2531	100
Texas	6	SEc SE SE 11-14-8E	2504–2538	50
Tibbens	10	CWL NW SE 30-15-9E	3011–3025	600
J. D. Chronic	1	SEc SE NE 30-19-8E	T.D.3670	Dry
Douglas	1	NWc SW NW 34-15-9E	T.D.3240	Dry
Billingslea et al.	1	NWc SE 22-14-9E	T.D.3761	Dry
Billingslea et al.	3	C SW NE NE 28-15-9E	T.D.3160	Dry

Garfield County—Garber

Company	Well No.	Location	Depth	Initial Production
Healdton	28	CEL NW NE 25-22-8W	1101–1114	10
Empire	19	CEL SE NW NW 25-22-4W	T.D.2200	5
Franchott	12	SEc SW SW 7-22-3W	2275–2308 OWD	20

Garvin County

Company	Well No.	Location	Depth	Initial Production
T. P. C. O	4	SEc SW SE 8-1-3W	1676–1679	110

Grady County

Company	Well No.	Location	Depth	Initial Production
Knox	2	SWc SE SW 35-3-5W	1209–1222	30

Hughes County—Papoose

Company	Well No.	Location	Depth	Initial Production
Independent	3	C NE NW NW 1-9-9E	3331–3395	20M
Skelly	1	C NE NW SE 2-9-9E	3341–3352	205
Independent	7	C SE SW NE 2-9-9	3322–3347	600
T. B. Slick	6	C SE NW SE 3-9-9E	3295–3318	435
Atkins et al.	1	C NW SW SW 19-9-9E	3371–3383 OWD	20M
Slick et al.	10	C SE SW NW 2-9-9E	T.D.3355	Dry
Berry	1	C SW NW SE 4-9-9E	T.D.3430 OWD	Dry
Tidal Osage	7	C NW NW SW 3-9-11E	T.D.3080	Dry

Kay County—Hubbard

Company	Well No.	Location	Depth	Initial Production
Marland	3	SWc NW NE 12-26-2W	2524–2528	20M
Marland	6	NEc 12-26-2W	2531–2533	40
Harris-Hahn	1	NE SE SE SE 2-26-1W	722– 723	½M
Prairie	3	C SW SE SE 1-26-2W	2528–2535	165
Prairie	5	C NE NE SE 1-26-2W	2515–2529	46M
Day	1	SWc NW 8-26-2W	T.D.5035	Dry

Kay County—Tonkawa

Company	Well No.	Location	Depth	Initial Production
Cosden-Marland	3-A	C NE SE NE 33-25-1W	4277–4295 OWD	1560

Lincoln County—Davenport

Company	Well No.	Location	Depth	Initial Production
Magnolia	1	NWc NW NE 3-14-5E	3404–3455	550
Magnolia	1	NEc SE SE 7-14-5E	3490–3549	15
Prairie	4	C NE SE NW 3-14-5E	3416–3468	342
Prairie	5	NW NE NW 3-14-5E	3411–3465	425

Major County

Company	Well No.	Location	Depth	Initial Production
Bradstreet	1	C SW 9-22-9W	T.D.4155	Dry

Muskogee County

Company	Well No.	Location	Depth	Initial Production
Summers	2	NEc NW SW 28-15-16E	1723–1755 OWD	1M
Middleton	3	CWL SW SE 19-16-15E	1270–1282	5

Noble County

Company	Well No.	Location	Depth	Initial Production
Comar	2	C NW NW NE 3-24-1W	T.D.3866	Dry

Okfuskee County

Company	Well No.	Location	Depth	Initial Production
Josey	3	SWc NE SW 33-12-11E	3662–3693	386
W. B. Pine	4	NEc SE NW 3-11-11E	T.D.2715	Dry
Riverland	1	SEc SW NE 30-11-11E	T.D.3100	Dry
L. Umborn	2	NWc SE 35-11-11E	T.D.3102	Dry

Okfuskee County—Papoose

Company	Well No.	Location	Depth	Initial Production
Cosden	6	C NE NW SW 35-10-9E	T.D.3408	Dry

Okmulgee County

Company	Well No.	Location	Depth	Initial Production
Sheldon et al	5	SWc SE SE NW 34-16-12E	2153–2163	12
Kellough et al.	3	CWL SW SE 29-15-11E	2482–2495	65
Olean	2	SEc NW 14-16-12E	2625–2638 OWD	400
J. G. Haas	11	CWL NE NW 15-14-14E	1615–1633	35
Misener et al.	2	CNL NE SE 32-15-11E	T.D.2490	Dry
Hastings	1	SEc NW 21-15-14E	T.D.2266 OWD	Dry
Papoose	22	CWL SW SE 21-15-14E	T.D.2212	Dry
Cline	3	NWc SW NE 30-15-14E	T.D.2390	Dry

Osage County

Company	Well No.	Location	Depth	Initial Production
S. S. Home	3-A	SEc 21-20-11E	2370–2378	30
Barnsdall	4	SW SE SW 1-21-8E	2318–2324	25
Breene et al.	9	SE NE SW NW 5-21-11E	2311–2315	518
Atlantic	3	NW NE NW SE 8-22-9E	2354–2357	50
Marland et al	6	SE NW SE NE 16-24-8E	520 –537	20
Western-American	2	NE NW 28-24-10E	1273–1286	35
Texas	14	SW NE 29-25-8E	2445–2471	138
Alexander	1	SW SE SW NE 9-21-12E	T.D.1560	Dry
Texas	14	CWL E½ NE 29-25-8E	T.D.2709	Dry
Owen Osage	324	SW SE SE 9-27-11E	T.D.1924	Dry

Osage County—Burbank

Company	Well No.	Location	Depth	Initial Production
Lewis	5	C SE NW NE 20-26-6E	2943–2986	415
Carter	4	C SE NE NE 20-26-6E	2926–2986	727
Carter	5	C SE NE NW 21-26-6E	2948–3004	420
Carter	7	C SW NW NW 21-26-6E	2940–3012	400
Phillips	15	C NW NE NE 11-27-5E	2946–3003	100
Phillips-Skelly	15	C SW NW 25-27-5E	2956–3005	40
Phillips	15	C NW NE NE 18-27-6E	2925–2966	75
Wah She She	7	SE SW SE 27-29-11E	977–1047	150

Pawnee County

Company	Well No.	Location	Depth	Initial Production
Adamson	4	SE SW NW SW 32-21-8E	2877–2932	160
Elmer	4	NW SW SW 16-20-6E	3033–3080	40
Glenn	4	NWc SE SE 16-20-6E	2928–2963	50
Magnolia	7	NWc NE NE 21-20-6E	3110–3122	30
Magnolia	1	SEc SW 32-23-3E	T.D.4248	Dry
Watchorn	1	SEc SE NW 4-22-3E	T.D.2950 OWD	Dry

Payne County

Company	Well No.	Location	Depth	Initial Production
Shaffer	13	NE NE NE 2-18-5E	1297–1315	6M

Seminole County—Cromwell

Company	Well No.	Location	Depth	Initial Production
Gypsy	3	C NW SE SE 5-10-8E	3399–3475	300
Gypsy	7	C NW NE NE 8-10-8	3404–3446	25
Carter	1	C NW NW NW 10-10-8	T.D.3469 OWD	Dry

Seminole County—Wewoka

Company	Well No.	Location	Depth	Initial Production
Ramsey	3	C SW NW SE 31-8-8E	3247–3255	1250
Ramsey	2	C SE SW NW 31-8-8E	3064–3094	59
Boggs-Sykes	6-A	SWc SE NE 31-8-8E	3228–3247	600
Dixie	1-B	C NE NE NE 5-7-8E	3946–4002	50

Seminole County

Company	Well No.	Location	Depth	Initial Production
Magnolia	1	SEc SW SW 25-8-7E	T.D.3492	Dry
Magnolia	1	C NE NE SE 35-8-7E	T.D.3545	Dry

Sequoyah County

Company	Well No.	Location	Depth	Initial Production
Eurkea	1	C NE SE 32-11-25E	2802–2825 OWD	8½M

Stephens County

Company	Well No.	Location	Depth	Initial Production
Magnolia	4	SWc NW 19-1S-8W	2160–2167	8M
Ellis Drlg.	5	NEc SE NE 19-1-8W	2152–2164	2½M
Gant et al.	4	NWc NE NW SE 32-1-8W	2248–2260 OWD	30
Magnolia	1	C NE NE NW 3-2-5W	2503–2534	75
Carter	6	SEc SW NW 30-1-8W	T.D.2533 OWD	Dry
Clark-Cowden	3	SWc 18-2-7W	T.D.1456	Dry

Tulsa County

Company	Well No.	Location	Depth	Initial Production
S. S. Home	2	NWc SE NE 15-19-11E	1675–1689	7½M
S. S. Home	3	NWc SW NE 15-19-11E	1706–1712	25
Baker-Lynch	1	SWc 26-19-11E	2284–2285	920
Riverland	1-A	NWc 35-19-11E	2284–2300	30
Munn et al.	3	SEc NE SW SW 20-19-12E	2126–2161	15
Wilson	4	NWc NE NW 29-19-12E	2080–2118	20
S. S. Home	1	NEc SW NE 15-19-11E	T.D.2275	Dry
S. S. Home	1	SEc 19-19-12E	T.D.2327	Dry
Webster	1	NWc SE 24-19-14E	T.D.1194	Dry
Red Bank	1	CWL NE SW 12-18-13E	T.D.2178	Dry

Wagoner County

Company	Well No.	Location	Depth	Initial Production
Maroney	1	CWL SW NW 14-17-16E	T.D.1500	Dry
Wright-Stryker	1	NWc SW NE 16-18-16E	T.D.1180	Dry
Martin	6	CEL SW SE SE 9-17-16E	805– 817	10
Dodd	6	SEc NW SE 14-17-16E	812– 824	30

KANSAS

Butler County

Company	Well No.	Location	Depth	Initial Production
Phillips	1	SWc NW NW 36-23-3E	T.D.2645	Dry
Phillips	3	NWc SW 31-23-5E	T.D.2488	Dry
Phillips	1	SEc 34-24-3E	T.D.3225	Dry
Marland	1	SEc NE 18-24-4E	T.D. 470	Dry
Mason et al.	1	NWc SW 6-24-6E	T.D.2855	Dry
Miller et al.	1	SEc 33-24-8E	T.D.3029	Dry
Phillips	1	NWc 18-25-8E	T.D.3098	Dry

Chase County

Company	Well No.	Location	Depth	Initial Production
Kingwood	1	C SE 21-19-8E	T.D.2465	Dry

Cowley County

Company	Well No.	Location	Depth	Initial Production
Shawver Elwell	1	NWc NE NE 17-34-3E	T.D.3800	Dry
Empire	3	NEc SW NE 13-31-7E	2706–2740	37

Cowley County—Carson

Company	Well No.	Location	Depth	Initial Production
Carter	4	SWc NW SE 19-32-3E	2621–2624	110
Slicj	2-A	SEc NE 19-32-3E	2585–2602	230
Gypsy	3	SWc SE 13-32-4E	2966–3012	100

Cowley—Graham

Company	Well No.	Location	Depth	Initial Production
Marland	3	SEc SW NW 10-33-3E	T.D.3511	200
Marland	4	NEc SW NW 10-33-3E	3484–3493	3750

Greenwood County

Company	Well No.	Location	Depth	Initial Production
Davis et al.	4	SWc SE 12-22-10E	2185–2197	75
Sinclair	12	SEc 19-22-10	2354–2410	250
Titus et al.	2	SEc NE NE 30-22-10E	2396–2452	510
York State	2-C	NEc SE NW 32-22-11E	1941–2006	400
Skelly	1	SEc SW SE 33-22-13E	1805–1818	50
Skelly	3	SWc NW NW 15-23-9E	2355–2397	400
Ark. Fuel	4	C SW SE SW 20-23-13E	1678–1690	15
Phillips	6	SEc NW SE 3-25-9E	2188–2129	50
Callahan et al.	1	NEc SE SE 33-23-13E	T.D.1854	Dry
Simmons et al.	1	SWc 9-24-11E	T.D.2575	Dry

Lyon County

Company	Well No.	Location	Depth	Initial Production
Kelly Bros.	1	SWc NW NW 33-21-12E	T.D.1948	Dry

Russell County

Company	Well No.	Location	Depth	Initial Production
Derby et al.	1-A	SWc NE SW 5-12-15W	2248–2284	1.7M

Sumner County

Company	Well No.	Location	Depth	Initial Production
Waite Phillips	1	SWc NE 9-32-1E	T.D. 4138	Dry

Woodson County

Company	Well No.	Location	Depth	Initial Production
Iowa-Kans	1	SEc NE NE 2-24-14E	1627–1641	15

It is probable that this well has practically no connection with the Cromwell field except as to general area conditions; it was first reported as an extension of that field's productive area, but the probabilities are that it is the discovery well of an entirely new pool, and that it is located on the edge of that pool. The producing sand was found, apparently, too deep for it to be an extension of the Cromwell sand, although it may occupy the same stratigraphic position in the new field, and the further fact that the gravity of the oil—34 degrees—is considerably lower than Cromwell crude strengthens the belief that a new field has been found.

The well had a hole full of water in the Papoose sand, or its equivalent, at around 3290 feet. This water was cased off and the well was taken on down. It is believed in some quarters that the water which drowned out the well may have come from this sand through faulty seating of the casing or similar trouble, but to the writer the well has all the appearance of having drilled in-

Completions in North Louisiana and Arkansas, Week Ended May 21

LOUISIANA

Caddo Parish

Company	Well	Location	Depth	Yield
Odell & Lawton	Weiss No. 3	15–21–15	1700	15
Ohio Oil Co	E. K. Smith No. 16	7–21–14	2305	100

Cotton Valley—Webster Parish

Crusaders Oil Co	Hope Estate B-16	25–21–10	2535	200
Crusaders Oil Co	Hope Estate B-17	24–21–10	2515	300
Fortuna Oil Co	R. R. Cox No. 1	15–21–10	2540	100
Humble O. & R. Co	Gray No. 6	26–21–10	2516	100
Ohio Oil Co	Bodcaw No. 28	28–21–10	2575	200
Ohio Oil Co	Gray No. 9	26–21–10	2570	150

Union Parish

Thrift O. & G. Co	Smith Russell No. 1	17–20–4E	2180	20m. gas

La Salle Parish—Urania

Rowe et al	Urania No. 1	7–10–2E	1545	Aband.
Urania Pet. Co	Urania No. 6	18–10–2E	1516	Aband.
Gould Monroe Drilling Co	Harper No. 1	23–10–1E	1497	Aband.

Waskom—Caddo Parish

Proven Production Co	Agurs No. 1	6–16–16	2712	10m. gas

TEXAS

Waskom—Harrison County

Roy Jenkins et al	Taylor No.1 C.Fuller HRS		3000	Dry
Waterman Lbr. Co	Fee No. 2 Bedford HRS		930	10m. gas

ARKANSAS

Hempstead County

Zing et al	Groves No.1	22–10–2E	1360	Dry

Stephens County

Buffalo Oil Co	Wesson No. 1	26–15–19	2440	Dry
Langston et al	Alley No. 1	25–14–19	2503	Dry
Transcontinental Oil Co	McClurkin No. 1	6–16–19	2190	15
Virgil Heath, trustee	Williams No. 1	1–19–21	2905	Dry

Smackover

Gilliland Oil Co	LaGrone S-6	36–15–17	2267	25
Hunt et al	Holton No. B-1	21–15–17	2670	Dry
James S. Smith	Shirey C-1	35–15–17	2287	Aband.
Zeller & Brown	Myatt No. 1	22–15–17	2323	50
Bailey & Murray	Rhoten B-2	32–15–15	2165	Aband.
Gray et al	Myar Estate No. 4	32–15–16	2265	50
J. H.Meeks, Recorder	McKenzie No. 9	36–15–16	2485	Aband
Penguin Oil Co	Hardin No. 2	27–15–16	2253	80
Roxana Pet. Co	Snyder No. 4	34–15–15	2377	5000
Amerada Pet. Co	Lyell No. 6	3–16–15	2357	6000
Arkado Oil Co	Hatfield No. 5	7–16–15	2562	Aband.
Sam Cook	Murphy No. 2	9–16–15	2463	2500
Eason et al	Palmer No. 1	9–16–15	2490	800
Federal Pet. Co	Flenniken No. 5	6–16–15	2395	600
Federal Pet. Co	Flenniken No. 6	6–16–15	2380	2000
Federal Pet. Co	Lawton A-10	10–16–15	2422	500
Hollifield et al	Giller No. 10	11–16–15	2410	350
Humble O. & R. Co	Pate No. 8	10–16–15	2387	3500
Keen & Woolf	Murphy No. 2	9–16–15	2460	400
Lion O. & R. Co	Lawton B-3	10–16–15	2450	2500
Lion O. & R. Co	Murphy H-1	9–16–15	2422	7000
McMurray et al	Hill No. 1	5–16–15	2365	800
Marine Oil Co	Hays No. 4	4–16–15	2360	4000
Nat. Gas & Pet. Co	Hill B-2	5–16–15	2375	600
Nat. Gas & Pet. Co	Lawton C-2	10–16–15	2450	400
Penguin Oil Co	Umstead No. 1	4–16–15	2360	700
Ramage et al	Lawton C-5	10–16–15	2395	1000
Ramage et al	Lawton C-6	10–16–15	2405	2000
Roxana Pet. Co	Bilyew No. 2	9–16–15	2402	3000
Roxana Pet. Co	Bilyew No. 4	9–16–15	2454	2000
Roxana Pet. Co	Hardy-Murphy No. 4	9–16–15	2380	6000
Shreveport Oil Corp	Murphy B-1	9–16–15	2480	4500
Southern Oil Purch Co	Graves No. 7	3–16–15	2390	500
Southern Oil Purch. Co	Lyell No. 5	3–16–15	2380	2500
Standard Oil Co	Hardy Murphy No. 3	9–16–15	2397	400
Standard Oil Co	Hardy Murphy No. 13	5–16–15	2370	500
Stewart et al	Murphy No. 1	9–16–15	2470	1000
Stewart et al	Murphy No. 2	9–16–15	2487	600
Sure Oil Corp	Flenniken No. 5	5–16–15	2385	250
Umstead et al	Fee No. 1	4–16–15	2370	3500
Unity Pet. Co	Roper No. 10	3–16–15	2381	5000
Woodley Pet. Co	Umstead No. 5	4–16–15	2375	800
Gulf Refining Co	Umstead A-8	33–15–15	2365	400
Gulf Refining Co	John Goodwin A-6	5–16–15	2388	800
Gulf Refining Co	Murphy Hardy No. 18	3–16–15	2385	3000
Gulf Refining Co	Murphy Hardy No. 19	4–16–15	2364	6000
Gulf Refining Co	Murphy Hardy No. 20	4–16–15	2360	700
Gulf Refining Co	T. C. Murphy No. 8	9–16–15	2415	Aband.

Completions in North and Central Texas, Week Ended May 23

Archer County

Company	Well No. Farm	Location—Survey	Depth	Initial Prod.
Stanley-Wynn	11 Wilson	A. T. N. C. 23	1603–1607	60
Texhoma	5 Wilson	A. T. N. C. 27	1580–1591	50
W. Phillips	1	B. B. B. & C.	1374–1378	100
Gulf Prod.	11 Monahan	T. E. & L. 1599	1264–1272	50
Magnolia	5 Rogers	T. E. & L. 2407	1331–1345	40
Judge Moore	1 Rogers	T. E. & L. 1596	1272–1277	75
United Cent.	8 Rogers	T. E. & L. 2407	1330–1351	25
Hart et al	7 Kunkel	T. E. & L. 1594	1227–1236	75
Muse et al	2 Lewis	Crawford 2	1249–1253	110
Arco	1 Stenlick	Denton	T.D.1856	Dry
Texhoma	1 Morrison	Denton 4	T.D.1824	Dry
Texhoma	2 Morrison	Denton 4	T.D.1808	Dry
Sun Oil	1 Priddy	A. T. N. C. 18	T.D.1900	Dry
Lincoln et al	1 Rutty	Reilly	T.D.1652	Dry
McCarty	1 Wilson	Hall	T.D.1642	Dry
Texhoma	7 Wilson	A. T. N. C. 31	T.D.1614	Dry
Atlantic	8 Parrish	H. & T. C. 26	T.D.1600	Dry
Sun	10 Farmer	Bell	T.D.1600	Dry
Rayzer et al	1 Porter	Portevant	T.D.1500	Dry
Humble	1 Longley	Jefferson	T.D.1250	Dry
Crossland et al	1 Garvey	Jefferson 94	T.D.1500	Dry
Pace et al	1 Watts	T. E. & L. 2417	T.D.1402	Dry
Magnolia	6 Rogers	T. E. & L. 2407	T.D.1339	Dry
Magnolia	1 Stampfli	T. E. & L. 2408	T.D.2026	Dry

Baylor County

Jones	1 Bassett	Smith	T.D.1755	Dry
Jones	1 Bassett	Smith	T.D.1755	Dry

Brown County

Rhodes-Hyer	3 Prater	W. B. Travis	1310–1320	50
Gillett-Dozier	3 Prater	Travis	1303–1315	50
Gilman et al	2 Teston	Smith	1245–1258	25
Rott et al	4 Newton	Miller	1271–1291	435
Lowe et al	1 Williams	Beck	1073–1093	8M
Conway et al	4 Newton	Miller	T.D.1300	Dry
Moore	1 Gafford	Miller	T.D.1300	Dry
Honea et al	1 DeBusk	Mitchell	T.D.2140	Dry

Eastland County

Lindley et al	2 Dulin	H. & T. C. 42	3382–3422	30
Magnolia	5 Rogers	Tyler	2894–2904	5
Gardizone	4 Stubblefield	H. & T. C. 3	3393–3411	50

Freestone County

Humble	1 Pope	Wortham	2990–3018	65

Hunt County

Marland	1 Fee	Hamilton	T.D.3785	Dry

Limestone County

Company	Well No. Farm	Location—Survey	Depth	Initial Prod.
Pure	1 Webster	Jackson	T.D.3620	Dry
Pure	22 Boyd	McNulty	3001–3015	108
Pure	24 Boyd	McNulty	2990–3015	77
Guffey et al	1 Welsh	Varels	T.D.3133	1½M

Navarro County

Humble	25 Ramsey	Smith	1660–1692	6
Humble	4 Smith	Havens	1521–1628	25
Humble	12 Kent	Smith	1604–1645	20
Humble	10 Ramsey	Smith	1584–1613	10
Pure	6 Kent	Smith	1582–1590	20
Garland Kent	1 Zsnasy	Meader	T.D.2100	Dry

Palo Pinto County

Hughes et al	2 Weldon	Smith	T.D.4700	Dry

Rains County

Anderson et al	1 Humphreys	Garrett	T.D.3360	Dry

Shackleford County

Hope	1 Moberley	T. P. 13	T.D.1004	Dry
Hope	1 Reynolds	T. P. 34	T.D.1007	3M
Phillips	12 Poindexter	B. A. L. 28	3360–3620	30, 5M

Stephens County

Simms	6 Jackson	T. P. 5	2968–2980	22
States	2 Boles	T. P. 83	T.D.3766	Dry
Gholson et al	1 Young	T. P. 64	T.D.2287	Dry

Thropmorton County

Gwinnup et al	1 Portwood	Gerbenrath	T.D.1502	Dry
Hamilton et al	1 Odell	T. E. & L. 695	T.D.3197	Dry

Wichita County

Hill et al	1 Mitchell	Tapp R	1500–1502	75
Silkwood et al	1 Tuttle	B. S. & F. 1	T.D.2020	Dry

Wilbarger County

Atlantic	4 Zipperle	H. & T. C. 80	1299–1383	250
Continental	5 Zipperle	H. & T. C. 80	1808–1813	140
Massey et al	9 Bond	H. & T. C. 100	2282–2305	200
So. Vernon	1 Zipperle	H. & T. C. 84	1285–1292	10
Atlantic	1 Zipperle	H. & T. C. 80	T.D.2200	Dry
Gulf	1 Zipperle	H. & T. C. 80	T.D.1500	Dry
Harrell et al	1 Waggoner	H. & T. C. 37	T.D.2361	Dry
Levy et al	1 Wheeler	I. & G. N. 56	T.D.2060	Dry
Gulf	1 Waggoner	S. P. 5	T.D.3003	Dry
Bass-Dillard	1 Waggoner	H. & T. C. 32	T.D.2406	Dry

Young County

Security	1 Smith	Holeman 82	T.D.1518	Dry
Texas	1 Graham	T. E. & L. 193	T.D.2113	Dry

to bottom water. The five-inch pipe was set at 3355 feet, so that the well has 174 feet of open hole from that casing point to the sand. It is possible, of course, that caving in this open hole allowed water to break in from above, but it does not appear likely.

In spite of this well's misfortune, it seems certain that a large pool will result from the discovery, and that when this had been developed, the original well will be found to have been located on the edge, as is the case with so many discovery wells. There is no doubt that the area around the well will be given a thorough testing. Several rigs already have been started in the vicinity, and it is reported that a number of other locations have been made. Cosden Oil & Gas Co., now known as the Mid-Continent Petroleum Corp. is building a rig in the NEc SE of 15-11-8, a direct south offset to the discovery well. Holm & Jarvis et al. are starting a rig in the NWc SW of 14, directly east of the Cosden location. A quarter-mile east of this well, Gardner Petroleum Co. is building a rig in the NEc E½ SW of 14-11-8. The two last-mentioned derricks are in Okfuskee county.

New Pool at Braman

Not satisfied with having an oil field named for it, although several miles away, the little town of Braman decided to have one right in its own back yard, so to speak, so that there would be no change of its being called other than the Braman field. To that end, it got a community well drilled in the SWc of 5-28-1W, adjacent to the northeast corner of the townsite, and is now celebrating a 405-barrel well, drilled into sand from 2353 to 2404 feet. The derrick originally was built by the Colcord Oil Co., of Oklahoma City, but was taken over by the Herbert Oil Co., and completed by that company. It is known as the No. 1 Community. The well is located on a small lease, of about 9 acres, it is reported. The Comar Oil Co. has the remaining 631 acres of that section under lease, besides considerable acreage surrounding it.

This well also was reported generally as an extension of the Braman field, which lies four miles north in 19-29-1W, but as a matter of fact it is a separate proposition, on a distinct structure mapped by the Comar's core-drilling operations. How the small 9 acre lease happened to be overlooked when that company was blocking its acreage has not been made clear to the writer. The town of Braman evidently is now in for a siege of town-lot drilling, as it is apparently right on top of the structure. Leases and royalties on townlots are changing hands at high prices, it is reported, and the city fathers are considering an offer from an oil company which wants a lease on the city park. This park is high on the structure, according to a check made on the "benches" therein.

The Herbert Oil Co. is digging a cellar for its No. 2, lying west of the discovery, according to reports. Its drilling campaign will extend to three wells, as that is all the nine acres will accommodate. However, the Comar will have to drill eight wells to offset these three. None of its locations have been announced as yet, however.

Current Production

After dropping to 444,175 barrels daily last week, Oklahoma production started back upward again during the week just closed, and gained 4575 barrels to a daily average of 448,750 barrels. Most of this gain was brought about through small increase scattered around through numerous fields not carried in the active list, including the new well at Thomas, which was not included in last week's estimate.

Burbank gained 860 barrels this week, averaging 57,100 barrels a day. This was derived from 1733 wells, a gain of four over the previous week. The Osage county side of the field had 1538 wells making 46,000 barrels while the Kay county side produced 11,100 barrels, from 195 wells.

Cromwell reported 354 wells, a gain of four, and increased its production 1215 barrels to 41,585 barrels daily. It is probable that this field will show larger increases during the coming two or three weeks, as there are a large number of wells drilling in the north end which should be in during that time. Papoose added three new wells, making its total 172, but fell off 1129 barrels, averaging 23,130 barrels daily during the week.

Tonkawa, now boasting 103 deep wells, and 766 altogether, gain of one during the week, declined 1590 barrels in production, averaging 59,380 barrels daily. Of this production, the deep wells contributed about 41,200 barrels daily. Wewoka added three new wells to its list, making 128 in all, and gained 250 barrels in output, to 14,675 barrels daily.

The Braman field had two new wells, making 17 in all, and not including the townsite well mentioned above. These wells added 1075 barrels to the field's daily average, which was 3800 barrels. Hubbard, in 26-2W, another of the northwest Kay county developments, produced 1535 barrels daily from 16 wells during the week, a gain of 200 barrels and one well. Otoe had 13 wells, the same as the week before and fell off 133 barrels to 6005 barrels daily. Davenport, Lincoln county, had 12 wells producing 3790 barrels daily. Wewleetka had 33 wells averaging 1970 barrels daily. Yeager, the one-well pool near Holdenville, averaged 397 barrels a day, a loss of three barrels.

In Kansas, Rainbow Bend held its own and increased slightly going up 490 barrels to 19,730 barrels daily. The rest of the state continued to increase, and Kansas as a whole averaged 102,000 barrels daily, a gain of 1915 barrels over the preceding week.

In Oklahoma, during the week just closed, 109 wells were completed, of which 62 were oil wells, 12 were gas wells, and 35 were dry holes. This shows

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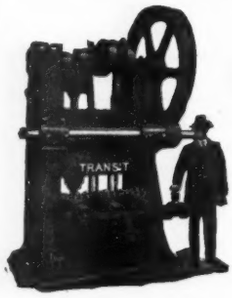

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a considerable decrease from last week, when there were 121 completions, divided 89 oil wells, nine gas wells, and 23 dry holes.

The 62 oil wells included in this week's report had a total initial production of 14,282 barrels, giving them an average initial production of 230.3 barrels per well. Last week, 89 wells brought in 14,274 barrels of new production, by a coincidence almost exactly the total initial output of the current week, and showed a per-well average of 160.4 barrels. Both the past two weeks recorded remarkably small per-well averages for Oklahoma, as that figure should be around 400 barrels to be normal.

Completions reported from Kansas this week totaled 29, of which 15 were oil wells, one was a gas well, and 13 were dry holes. Last week, there were 38 Kansas completions, divided 26 oil wells, two gas wells, and 10 dry holes. This week's 15 oil wells had a total initial production of 6192 barrels, giving them an average of 412.8 barrels. Last week, 26 wells accounted for 11,188 barrels of new production, with a per-well average of 430.3 barrels. It is interesting to note that in both these weeks, Kansas showed a higher per-well average than Oklahoma, the first time this has happened at least during the past three years.

Exports From Tampico

Exports from Tampico District

Company	March	April
Transcontinental Petroleum Co., (Standard of New Jersey)	3,132,120	2,348,573
Huasteca Petroleum Co. (E. L. Doheny Interests)	4,077,929	3,121,936
Mexican Eagle Oil Co. (El Aguila)	1,995,053	1,335,734
Cia. Mexicana-Hollandesa "La Corona"	742,369	1,062,668
Mexican Gulf Oil Co.	381,875	278,356
The Texas Company of Mexico	198,256	59,731
Sinclair Mexican Cos.	617,975	820,096
East Coast Oil Co. of Mexico, (So. Pacific)	153,635	334,664
Interocean Petroleum Co,	48,821	.....
Empire Gas & Fuel Co.	298,370	55,624
Panuco-Boston Oil Co.	58,545	58,696
Mexican Oil Exporters Co.	31,557	58,762
Unity Oil Co.	67,770	55,428
New England Fuel Oil Co.	.....	16,782
Total	11,804,275	9,607,060

WINDSOR, MO.—L. E. Leonard has sold his stations at Windsor and Calhoun, Mo., to Luther Hunt, who will operate them under the present trade name, Windsor Oil Co. Mr. Leonard has also sold his station at Lincoln and Green Ridge, Mo., to the Skelly Oil Co. He still remains in the business, however, and recently opened a bulk station at Columbia under the name of the Leonard Oil Co.

NEOSHO, MO.—Wayne Sansbury of the Independent Oil Co. of this city, has completed a service station on the Neosho-Joplin highway.

Neutral Oils

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Keen & Woolf Oil Co., Houston, Texas

500 Vis. No. 4½-5½ Color Unfilt. Red
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Keen & Woolf Oil Co., Houston, Texas

1200 Vis. No. 3½-4 Color Unfilt. Pale
Keen & Woolf Oil Co., Houston, Texas

2000 Vis. No. 3½-4½ Color Unfilt. Pale
Keen & Woolf Oil Co., Houstan, Texas

120 Vis. Black
Keen & Woolf Oil Co., Houston, Texas

210 Vis. Transmission Lube.
Keen & Woolf Oil Co., Houston, Texas

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Indian Refining Company, Lawrenceville, Ill.

180 Vis. No. 5 Asso. Filt.
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90 Vis. at 100° F. No. 2 Color (Pale)
Craig Oil Co., Toledo, O.

200 Vis. at 100° F. No. 3 Color (Pale)
Craig Oil Co., Toledo, O.

OKLAHOMA

200 Vis. No. 3 Color
Bell Oil & Gas Co., Tulsa, Okla.

PENNSYLVANIA

150 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Seneca Oil Works, Warren, Pa.

150 Vis. No. 4½ Filt. (Red)
Crystal Oil Works, Oil City, Pa.

180 Vis. No. 3 Asso. Filt.
Emery Mfg. Co., Bradford, Pa.
Seneca Oil Works, Warren, Pa.

200 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa
Emery Mfg. Co., Bradford, Pa.
Empire Oil & Grease Co., Inc., Oil City, Pa.
Seneca Oil Works, Warren, Pa.

Cylinder Oils

PENNSYLVANIA

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Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Crystal Oil Works, Oil City, Pa.
Emery Mfg. Co., Bradford, Pa.
Lucinda Refining Co., Lucinda, Pa.

635 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Emery Mfg. Co., Bradford, Pa.

650 Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
McKean County Refining Co., Bradford, Pa.
Seneca Oil Works, Warren, Pa.

600 Flash Steam Refined
Bradford Oil Refg. Co., Bradford, Pa.
Butler County Oil Refg. Co., Bruin, Pa.
Emery Mfg. Co., Bradford, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford, Pa.
McKean County Refining Co., Bradford, Pa.
Waverly Oil Works, Pittsburgh, Pa.

620-630 Flash Steam Refined
Waverly Oil Works, Pittsburgh, Pa.

600 Warren E
Butler County Oil Refg. Co., Bruin, Pa.

600 Oil City E
Butler County Oil Refg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
Independent Refining Co., Oil City, Pa.

600 Filtered D
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Waverly Oil Works Co., Pittsburgh, Pa.

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Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
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Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

Chatterless Oil Base
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Waverly Oil Works Co., Pittsburgh, Pa.

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Columbia Oil Co., 3419 Papin St., St. Louis, Mo.
Richardson Lubricating Co., Quincy, Ill.
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Yuba Oil Refining Co., Nacogdoches, Texas

Cutting Compounds
Damascus Mfg. Co., Cleveland, O.
Stevens Grease & Oil Co., Cleveland, O.

Gear Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Yuba Oil Refining Co., Nacogdoches, Texas

Jack-Post Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

Mill Grease
Stevens Grease & Oil Co., Cleveland, O.

Mine Car Lubricants
Stevens Grease & Oil Co., Cleveland, O.

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Fiske Bros. Ref. Co., 24 State St., New York, N. Y.
Branch 215 Pontiac St., Toledo, Ohio
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.
Stevens Grease & Oil Co., Cleveland, O.

Soluble Oils & Base
Damascus Mfg. Corp., Cleveland, O.
Stevens Grease & Oil Co., Cleveland, O.

Sponge Grease
Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

Transmission & Differential Grease
Capstone Mfg. Co., Plum Pt. Lane, Newark, N. J.
Columbia Oil Co., 3419 Papin St., St. Louis, Mo.
Damascus Mfg. Corp., Cleveland, O.
Fiske Bros. Ref. Co., 24 State St., New York, N.Y.
Branch 215 Pontiac St., Toledo, O.
Stevens Grease & Oil Co., Cleveland, O.

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ILLINOIS

124-126 White Crude Scale
Indian Refining Company, Lawrenceville, Ill.

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Turn to the advertiser's index facing the back cover for page number when you want details as to branch offices or the products they specialize on.

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Bell Oil & Gas Co., Tulsa, Okla.

PENNSYLVANIA

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Kendall Refining Co., Bradford, Pa.

124-126 Crude Scale (off white)
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128-130 Refined
Waverly Oil Works Co., Pittsburgh, Pa.

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Imperial Oil Mktg. Co., Tulsa, Okla.

32-36 Gas Oil
Imperial Oil Mktg. Co., Tulsa, Okla.

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30-32 Fuel Oil
Ashland Refining Co., Ashland, Ky.

34-38 Gas Oil (light)
Great Southern Refining Co., Lexington, Ky.

34-38 Gas Oil (dark)
Ashland Refining Co., Ashland, Ky.
Great Southern Refining Co., Lexington, Ky.

38-40 Gas Oil (light)
Ashland Refining Co., Ashland, Ky.

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Louisiana Oil Refg. Corp., Shreveport, La.

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32-36 Gas Oil
Louisiana Oil Refg. Corp., Shreveport, La.

34-36 Gas Oil
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Roxana Petroleum Corp., St. Louis, Mo.

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Cameron Refg. Co., Ardmore, Okla.

38-40 Straw Distillate
Bolene Refining Co., Enid, Okla.

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Mutual Refg. Co., Warren, Pa.

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Mid-Continent Refiners Do Big Business with Small Stocks

Staff Special

Tulsa, May 22.—Mid-Continent refiners have demonstrated their ability to carry on large gasoline business with relatively small inventories, according to the weekly bulletin of the Western Petroleum Refiners Association issued today. H. K. Davis, statistician for the association shows that, during the first three months of 1925, Mid-Continent refiners have shipped 26 per cent of all gasoline shipped from U. S. refineries with stocks ranging from 12 per cent on Jan. 1 to 14 per cent on April 1.

Following is the analysis of the government figures as given in the bulletin:

Mid-Continent vs. the U. S.

"The Mid-Continent has been favored with a large gasoline business during the early part of the year. A portion of this consisted of shipments for export. While exports from the United States during the first quarter of the year were increased 17.44 per cent over those during the same period of 1924 this really represents quite a large amount of product. It was the equivalent of 4840 cars of ten thousand gallons each, or 194 solid trainloads of twenty-five cars to the train. As previously stated, a portion of this business was supplied from Mid-Continent plants.

"Refineries in other sections of the country also made large shipments and with the progression of the year through the three months for which Government reports are available actually increased their shipments at a greater rate than the Mid-Continent plants. During January Mid-Continent refineries shipped 27½ per cent of the gasoline leaving all refineries of the country; during February their share was 27 per cent; and during March, the latest month of record, the Mid-Continent share was but 24½ per cent.

"On the first, and at the close of January Mid-Continent plants held 12 per cent of the country's gasoline supply. It is of particular significance that, despite remarkable business, the Mid-Continent plants during the first quarter of the year actually weakened their position with respect to gasoline stocks in comparison with other plants of the country and at the close of March held 14 per cent of the country's stored supply. Mid-Continent stocks are still low with respect to volume of business. Their future position will of course depend on operations.

Small Inventories

"The Mid-Continent plants have demonstrated their ability to carry on a large business with a relatively smaller inventory than refiners of other sections of the country. The economy of this requires no comment. There is a vast amount of truth in the following quotation from Mr. Joseph E. Pogue:

"'Economic experience has shown time after time that industrial prosperity always follows depleted inventories, and large stocks are to be shunned as precursors of depression.'"

The following table presents some interesting data:

Mid-Continent Percentage of U. S. Gasoline Shipments and Stocks

	Stocks—Beginning	Stocks—Close	Shipments
Year 1919	18 %	25 %	26½ %
Year 1920	25	16	28
Year 1921	16	17	26
Year 1922	17	20	25
Year 1923	20	14	22½
Year 1924	14	12	23½
Jan. 1925	12	12	27½
Feb. 1925	12	12½	27
March 1925 ..	12½	14	24½
3 mos. 1925 ..	12	14	26

Number of Day's Supply

Based on the average daily shipments during the first quarter of the year, gasoline stocks the first of April, 1925, were at a much lower level than on the same day of the previous two years this being particularly true of the Mid-Continent refiners.

Days supply on hand April 1, measured by daily average shipments during first quarter of each year

	1923	1924	1925
East Coast	119	119	109
Penna.- etc.	58	69	56
Ind.-Ill.-etc.	109	127	78
Oklahoma-Kansas ...	75	85	46
No. and Cent. Texas..	24	27	16
No. La. and Ark.	20	23	20
Mid-Continent	64	68	37
Texas Gulf	66	43	49
La. Gulf	84	160	101
Total Gulf	72	69	60
Colorado-Wyoming ..	97	139	132
California	49	78	88
United States	78	90	71

ALL ABOARD!

These Three Mix Oil and Politics

COVINGTON, OKLA.—At least three oil men who not only superintend their respective oil businesses, but also superintend the business of the whole town, are C. H. Fox, superintendent of the refining division of the Peppers Gasoline Co. of this city, who was elected mayor of Covington recently; J. M. Hawkins, president of the Imo Oil & Gas Co., oil operator in the Covington-Garber field, who was elected to the town council; and P. H. Shelton, associated with Mr. Fox, who was elected town clerk for the ensuing term.

THE EDITORS' VIEWPOINT

No Lack of Opportunity

WITH the avenue for attacking business in this country individually and as a whole through the medium of the Federal Trade Commission blocked by the adoption of new rules of procedure to govern that body, chairman Huston Thompson apparently has turned to public addresses as a means of venting his spleen against organized industry.

In an address in Cleveland recently Thompson said that "monopoly and great business combinations are depriving the coming generation the opportunity by which youths can advance by their own initiative." He must have based that observation, if he was correctly quoted in the papers, on his knowledge of conditions in the business world today. And what a fallacy that is in this country, where organization in industry has been carried to its greatest degree.

There was never a time when the individual of courage and resource could make greater progress than today. Look around among the business men with whom you come in contact. How many of them—some who have been in this country only a few years—are successful masters of their own enterprises? The automobile industry is largely one of big enterprises. It would have been incapable of its present stage of development otherwise. Yet how many thousands and thousands of small businesses have been developed and are being successfully operated by individuals as an adjunct to that industry in making parts or accessories, individuals who saw the opportunity to do something cheaper or more efficiently than the big organizations could.

In our own industry, the oil business has been brought to its present stage of development by the large organizations. Yet how many individuals have made places for themselves through their ingenuity and resourcefulness, and are recognized by the public as performing a useful service. The same story could be told of countless other lines of business endeavor.—V. B. G.

The Coal Propaganda

THE soft coal mine operators of the country seem launched on a propaganda campaign to lead the public to believe that a good share of the troubles in which the coal business now finds itself is due to competition of oil as fuel with coal, and that that competition is an economic waste of oil. The coal operators' association is gathering any comment to the end that the competition of oil with coal is an uneconomic use of oil from answers of oil men and others filed with the Federal Oil Conservation Board.

It made much of an answer of George Otis Smith, head of the Geological Survey and technical adviser to the conservation board, to a private institution seeking his advice that an oil heating plant should not be installed because at some far distant date the oil that would be consumed there might be needed for some other use. It is broadcasting any experiences of dissatisfied operators of oil heating plants for homes.

We do not believe the oil industry should allow to go unchallenged this linking up of the discussion of where future generations will get their oil supplies and whether or not they will be ample, with the present competition between coal and oil. The former is an abstract discussion launched to protect future generations of Americans, if it can be assumed they will need that protection. The latter is a matter of straight competitive business.

The refiners of the country have the fuel oil in their tanks today. To make gasoline, a vitally necessary product, they will make fuel oil in great quantities in coming years. Can they do otherwise than develop a useful market for this product which will allow them to operate their business as a whole at a profit and continue in business to serve the public?

It seems to us the economic fallacy is in arguing against any form of fair business competition because of the fears of one party to the competition, whether it be between individuals, companies or industries. If it has done nothing else the oil industry has done a great deal to educate the public to the knowledge that it is possible to develop its heat and power at much less inconvenience and more efficiently than with the antiquated coal plants it has been accustomed to. A result of this is to be seen already in the improvement of the coal plants, even to the lowly domestic furnace. If the coal business years ago had set itself to work out the most efficient use of its product by the public the chances are it would be in a position today to be less affected by the competition with oil.—V. B. G.

Checking Equipment

A DRILLING contracting firm which handles a great deal of equipment tells us one of its chief problems is keeping track of equipment. Every now and then someone turns up something that has been left behind when a well was completed and turned over to the owner.

Oddly enough, the trouble seems to lie in the fact the office organization and the field force fail to understand each other. Both speak English, but of different varieties. A field man will have one name for something which is known by a different name in the office. The office inventory system falls down until a great deal of material is lost to the records and there is no real accounting for anything.

This trouble is by no means general, but this firm says there is more of it than is commonly believed. The simplest remedy lies in the employment of a field man, thoroughly familiar with all equipment, to spend his entire time in accounting for everything from the time it is purchased until it becomes unserviceable. Large companies are seldom affected by such condition, but the smaller organization, limited in personnel, sometimes lacks the detailed information on its own material that it should have.—L. E. S.

News item says Germany is exporting razor blades to Russia. Having tried to use a package of these blades, we are in position to say that they will make no great change in the Russian appearance.

Ellick Botts, enterprising wildcatter, who is drilling on the Lickskillet, Mont., structure, is now the only oil man who hasn't heard from the Federal Oil Questionnaire Board.

Saw an old fashioned girl the other day. She wore high shoes and was doing a cross-word puzzle.

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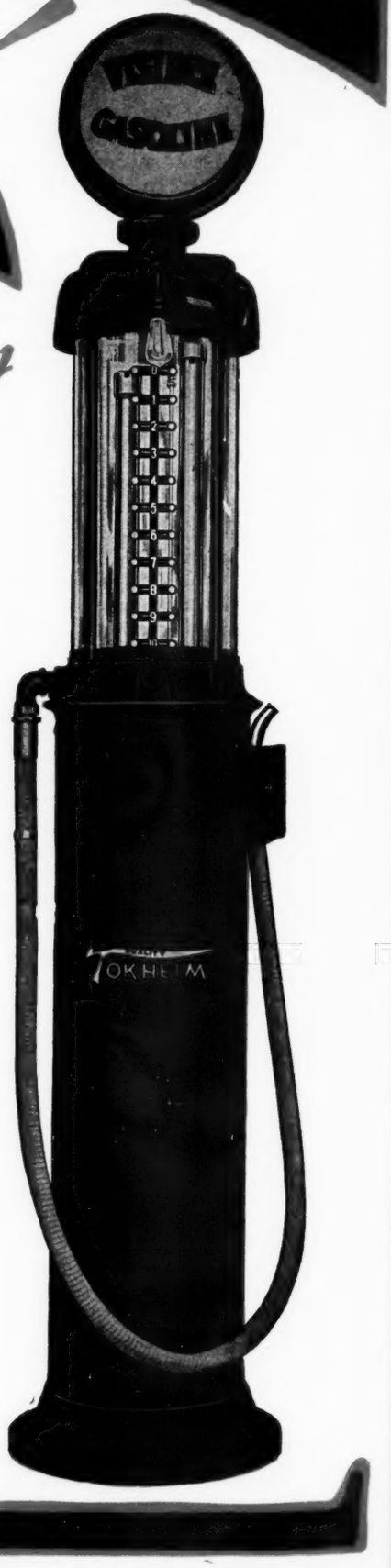

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No. 290 5 Gal. Hand Operated

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HERE AND THERE

J. M. Hagan and J. E. O'Connor, both of whom are well-known to the gasoline trade in the east, have recently been appointed general manager and New Haven district manager respectively of the Dixie Filling Stations, Inc., which has headquarters at Hartford, Conn., according to a recent issue of "The Beacon Flash," official house organ of the Dixie company.

Mr. Hagan, who recently resigned from the Vacuum Oil Co., New York, started with that company 12 years ago as salesman in the Boston office, covering Maine, with headquarters in Portland. After several years, he became special representative, and later was appointed manager of the Pittsburgh, Pa. office. After five years at Pittsburgh, he worked for two years promoting Mobiloil sales in six southeastern states. He was then transferred to the New York offices.

Mr. O'Connor, who is better known as "Jack" to many eastern motorists, also has had extensive experience in the retail end of the oil industry. He began as salesman with The Texas Co. in March, 1912, and the following year was specializing on factory trade. In 1914 he was appointed agent of the Texas Co.'s Hartford, Conn. branch. After two years, he succeeded F. F. Hale, who is now president of the Dixie company, as state supervisor in Connecticut, Mr. Hale taking over the Massachusetts territory.

While he was with The Texas Co., Mr. O'Connor started a filling station of his own, and founded the Arrow Filling Stations, but due to poor health, sold out to the Dixie company. Mr. O'Connor claims to be the first in Connecticut to give real crank-case service. He was the first distributor for the Dixie company and for a long time, the only one.

* * *

Wall & Steigerwald, Inc., have moved to larger quarters at 1064 Union Trust bldg., Cleveland. The firm's former office was on the sixteenth floor of the same building.

* * *

A. L. (Jack) Johnson, president of the Pulaski Oil Co., Pulaski, Tenn., was recently presented with a daughter, Beatrice Ann, according to E. E. Johnson, president of the Columbia Oil Co., Columbia, Tenn.

* * *

B. F. Diggs has been elected general manager of the Paris Oil Co., Paris, Tenn., and took charge on April 1.

J. C. Bertsch, well known as a natural gasoline and refinery engineer, was recently made chief engineer of Cosden & Co. at Tulsa.

* * *

R. L. Ament, salesman for the Gulf Refining Co. at Greensburg, Pa., has become salesman for the Sinclair Refining Co., at Latrobe, Pa., according to George S. Millard, agent for the Sinclair at Latrobe.

J. M. HAGAN
Recently elected district manager of Dixie Filling Stations, Inc

New Rochelle, N. Y.—George Ritacco, owner of two service stations here, has purchased a site for a third station. One of the stations is equipped with washing and greasing facilities.

* * *

G. R. Brown, salesman for the Standard Oil Co. of Indiana, who has been located at Ulysses, Kan., for the past two years, has been transferred to another Kansas territory.

* * *

S. E. Byrd, auditor for the Pine Bluff Refining Co., Pine Bluff, Ark., attended the convention of the Associated Advertising Clubs of the World at Houston, Tex., recently, as one of the representatives of the Pine Bluff Advertising Club, according to C. B. Wood, superintendent of the company.

* * *

Homer J. Smith, formerly sales manager for the Waite Phillips Co., has become sales manager for the Kendrick Oil Co., Tulsa.

* * *

E. T. Baker, agent for the Sinclair Refining Co. at Sabetha, Kan., attended the Sinclair convention at Topeka, Kan., on April 13.

* * *

C. I. Larsen, manager and treasurer of the Pine Bluff Refining Co., Pine Bluff, Ark., is back from El Dorado, Ark., where he has been negotiating the sale of his company's pipe line facilities at Louann, Ark., reports C. B. Wood, superintendent.

* * *

E. R. L. Boyd, district manager at Wichita, Kan., for the Waverly Oil Works Co., Pittsburgh, Pa., is on an extensive trip through Louisiana, Arkansas and Texas.

* * *

M. M. Valerius, of the M. M. Valerius Oil & Gas Co., Russell, Kan. spent a few days at Tulsa recently on company business.

* * *

E. M. Cook is now representing The Texas Co. in central southern Michigan.

* * *

C. T. Loflin formerly with The Texas Oil Co. of Alexandria, La., recently became general manager of the Louisiana Oil Corp. in Mississippi, with headquarters for that state at Jackson, Miss., according to S. O. Dunlop.

* * *

J. R. Trolinger, district sales representative at St. Paul, Minn. for Empire Refineries, Inc., has returned to the office after a 10 day inspection trip over the southern half of Minnesota. "The prospects for a good crop are the best in several years," Mr. Trolinger says.

* * *

C. M. Wellhauser, formerly salesman for the Standard Oil Co. of Indiana, was elected manager at a recent stockholders meeting of the Oil Service Co., Adrian, Mich. Mr. Wellhauser says "Watch us grow," according to L. A. Derby.

* * *

J. Blaustein, vice president and general manager of the American Oil Co., Baltimore, Md., which has branches in most of the important cities on the Atlantic seaboard, will be married in June and will leave immediately thereafter for an extended European trip.

* * *

Mrs. Grace Lockyer, private secretary to A. L. Derby, of the Derby Oil Co., is at a Wichita hospital recuperating from a tonsil operation.

* * *

A. L. Derby, of the Derby Oil Co., Wichita, Dan Callahan and Ross Atchison, and others, of the Derby company, have just returned for a directors' meeting at New York City.

Texas Co. Operating Report Shows Greater Efficiency Attained

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, May 22

INCREASED efficiency and economy of operation together with a good inventory position at the beginning of 1924, are credited by President Amos L. Beaty of The Texas Co. for the improved returns to that company last year. He sets this forth in a review of 1924 operations in the Texaco Star, the company's own publication.

"Increase in working capital, decrease in accounts and notes payable, lower percentage of expense to earnings, more business handled with a less number of employes and smaller payroll, are some of the results obtained," he says. "The volume of business increased about 20 per cent and the payroll decreased 5 per cent.

"The outstanding accomplishment was in the refining department. Runs of crude increased 21.5 per cent, the charge to pressure stills increased 68.9 per cent, and gasoline production increased 43.4 per cent, with an increase of only a little over 3 per cent in operating expense."

Refinery Output

Tables accompanying Mr. Beaty's review show the following results in 1924 in the refining department, compared with 1923:

	1924	1923
Crude runs, bbls.	35,919,830	29,556,803
Production:		
Gasoline, bbls.	14,355,194	10,012,621
Kerosene, bbls.	3,808,260	3,301,959
Lubes, bbls.	1,477,301	1,403,962
Gas oils, bbls.	319,493	724,651
Fuel oils, bbls.	12,402,461	11,547,048
Asphalt, tons	323,909	338,499
Wax, tons	4,667	4,843
Coke, tons	1,442	545
Roofing, sqs.	885,546	995,504

"In the producing department," Mr. Beaty continues, "a slight decline in crude production occurred. Early in the year indications were that production of the country would materially decline, but the situation soon changed and it again ran up. The overproduction that ensued had its effect upon our policy, and, as in the preceding year, it was deemed unwise to press drilling campaigns in the face of overproduction and enormous stocks above ground. It seemed better to continue meeting our requirements largely through purchases at low prices, and acquire and hold prospective acreage for future exploitation. We therefore did but little exploratory drilling. But the producing department materially improved its earnings over the previous year. This was accomplished by reduction of expenses."

The year's production in various American regions for the year compared with 1923 production as follows (amounts in barrels):

	1924	1923
North Texas	2,275,757	2,536,503
North Central Texas	1,076,925	1,632,776
So. and Cent. Texas	6,527,867	7,400,010
Louis'na, inc. E. Tex.	1,313,675	1,534,056
Arkansas	2,189,128	1,274,838
Oklahoma, Kansas	3,765,217	3,990,296
Wyoming	314,217	221,799
Colorado	255,594	0
Total	17,718,292	18,590,278

At the end of the two years producing wells were distributed as follows:

Field	1924	1923
North Texas	758	754
North Central Texas	183	227
South and central Texas	243	250
Louisiana, inc. east Texas	262	269
Arkansas	117	38
Oklahoma, Kansas	1,163	1,138
Wyoming	24	27
Colorado	1	0
Total	2,751	2,703

Operating summary for the two years compare:

	1924	1923
Oil wells completed	213	225
Gas wells completed	20	18
Oil wells abandoned	170	224
Dry holes drilled	58	60
Wells drilling at end of year	46	29

At the end of 1924 the company held 482,087 acres in fee and 911,962 under lease, a total of 1,394,049 in the United States. At the end of 1923 it held 430,029 in fee and 1,070,350 under lease, a total of 1,500,379.

Natural Gas Operations

It summarizes its natural gas and natural gasoline operations as follows:

	1924	1923
Plants at end of yr.	14	15
Gals. gasoline prod.	16,259,104	17,351,492
M cu. ft. gas prod.	17,177,703	9,870,453
Gas wells year end.	92	86
Miles pipe lines	280	276

A comparative summary of its Mexican operations follow:

	1924	1923
Oil prod. bbls.	1,573,520	2,637,612
Oil wells completed	5	5
Dry holes drilled	3	4
Wells abandoned	3	5
Wells at end of year	25	23
Wells drilling	0	1
Fee lands, acres	2,242	2,242
Leaseholds, acres	27,353	169,437

The report states the production shown is gross and that royalty and other outside interests averaged 15.4 per cent in 1924 and 13.7 per cent in 1923 in the United States, and 23.6 per cent in both 1924 and 1923 in Mexico.

During 1924 the company bought 18,997,071 barrels of crude in the United States and 1,847,368 in Mexico. In 1923 it bought 17,752,425 barrels in the United States and 6,721,751 barrels in Mexico.

"The pipe line companies, the marine department, and the natural gas department did well, and in sales, the export department including foreign marketing subsidiaries as a whole, and the western territory are entitled to favorable mention," Mr. Beaty says. "Northern and southern territories met the emergency in handling volume, but were not successful in obtaining good prices. Railway sales and asphalt sales fared only somewhat better.

"Improvement in earnings was not due to better prices but was in spite of lower prices. That lower prices were realized, is apparent from the fact that the increase in manufacture and sale was over 20 per cent in volume, principally of the more valuable products, while the increase in sales revenue was less than 13 per cent. The results were due in part to our inventory position at the beginning of the year and in part to increased efficiency and economy of operation."

Source of Revenue

Gross revenue exclusive of insurance claims collected, federal tax refunds and proceeds from the sale of obsolete equipment and salvaged materials, was serves ever known. "Commercially sucderived through the various departments as follows:

	1924	1923
Northern territory	$66,761,688	$65,096,412
Southern territory	39,590,408	35,010,622
Western territory	12,513,377	7,452,955
Asphalt sales	4,843,228	4,609,694
Railway sales	5,161,878	4,786,289
Foreign sales	48,055,170	39,425,085
Special sales	2,111,056	4,468,032
Natural gas	1,268,396	958,698
Pipeage (oil carried for others)	2,574,255	2,031,698
From other sources	9,344,738	5,543,838
Total	$192,224,195	$169,382,738

Mr. Beaty's statement continues: Additions to plant account were: Producing department $5,376,236; refining department $4,247,666; domestic sales departments $5,064,155; pipe line companies $1,389,312, and miscellaneous $1,536,001, or a total of $17,614,270. Against these were charge-offs amounting to $15,453,819, so that the net increase was only $2,160,451. The producing department alone, to clear the books of abandoned properties and be relieved of rental under leases where the land was no longer considered prospective, charged off $8,265,341, which exceeded its additions and therefore decreased its total investment by $2,889,105.

Taxes Are Burdensome

"Taxes were very burdensome. They are supposed to be coming down. But that is not true in our case. If we include the federal income tax which the company owes for 1924 but is not paid until 1925 the total amount for the year exceeded 50 per cent of the net earn-

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ings. Gasoline tax alone amounted to $6,203,892."

A summary of pipe line operations showed runs from leases of 35,188,422 barrels as against 35,320,317 barrels in 1923; deliveries to refineries of 30,605,-230 barrels as against 23,318,185, and shipments for other companies totaling 9,587,753 barrels compared with 9,360,-225 barrels in 1923.

Its pipe line systems in Texas, Louisiana, Arkansas and Oklahoma were divided as follows:

	1924	1923
Trunk mileage	2,179.43	2,195.51
Loops and branches	749.29	724.59
Gathering lines	1,695.62	1,683.80
Total mileage	4,624.34	4,603.90

The ocean-going equipment consisted of 19 steam vessels of 119,322 gross tonnage; five motor vessels of 7300 gross tonnage, four tugs, and four barges of 4430 gross tonnage. In addition the company owned 113 river and harbor craft. It had in service during 1924 1922 owned and 3341 leased tank cars as against a total of 5335 in 1924. During the year it loaded 113,637 cars which traveled a total of 70,024,155 miles, an average mileage per car of 13,310 and an average daily mileage per car of 36.36. The average mileage per car in 1923 was 12.316 and average per day per car was 33.74.

In ocean vessels during the year was carried 2,749,268 tons of cargo as against 2,922,377 the year before. Harbor lighters handled 630,030 tons, as against 618,735 in 1923.

From 1903, the year following its organization The Texas Co. has paid out a total of $156,312,175 in cash and stock dividends, distributed over the period as follows:

1903	$165,000	1914	$2,550,000
1904	180,000	1915	3,000,000
1905	300,000	1916	3,350,000
1906	609,348	1917	4,532,500
1907	1,001,925	1918	9,712,500
1908	2,296,853	1919	7,718,750
1909	1,868,427	1920	25,475,000
1910	10,562,872	1921	18,057,000
1911	2,700,000	1922	19,734,000
1912	1,350,000	1923	19,734,000
1913	1,620,000	1924	19,734,000

Will Try Mining Plan in Roumanian Field

LONDON, May 22.—That a test will be made in Roumania of the oil mining system used in the Pechelbron fields of Alsace was revealed in the recent meeting of Steaua Romana (British) Ltd. Sir Charles Greenway, chairman, in his statement to the meeting said:

"Arrangements have been entered into with a French company which has been formed for the purpose of utilizing the system of wells and galleries, which has been successfully adopted at Pechelbron, in Alsace, for the purpose of draining wells which will no longer yield a paying production by the ordinary methods of drilling and pumping. This system will be tried experimentally on some worked-out areas in the Campina district, and it is hoped that it may lead to paying production from territory which has hitherto been regarded as practically exhausted."

Texon Restraining Order Provides For Audit of Company Records

By Paul Wagner
N. P. N. STAFF WRITER

EL PASO, May 22 COMPLAINING stockholders in the Texon Oil & Land Co. of Delaware won a victory in Forty First District Court at El Paso, Wednesday, when Judge P. R. Price rendered an order appointing M. W. Mattison of Houston and New York City to audit the books of the corporation; restrained the voting of 1,400,000 shares of stock issued in the name of Carl G. Cromwell, its sale and transfer; restrained the sale of any properties; and restrained the further issue of any stock.

The court order also restrained the defendants from taking an action with regard to a contract between Haymon Krupp and Frank T. Pickrell, on the one hand, and the Texon Oil & Land Co. of Texas on the other. Under terms of this contract, dated November 3, 1924, Krupp and Pickrell sold 363 shares of Group I Oil Corp., an affiliated company, to Texon Oil & Land Co. of Delaware. Krupp and Pickrell were also restrained for six months from selling or delivering to anyone any of the shares they now own in Group No. 1.

In connection with the Group 1 stock contract mentioned, the statement was made in a letter sent to Texon stockholders in the latter part of April that Texon of Delaware owned control of Group No. 1. The records of the company show that 2,048 shares of Group 1 are outstanding, 1,024½ of which are in the name of Texon of Delaware; but included in the 1,024½ are 363 shares, referred to in the court order, which have not been paid for by Texon but which are under contract of sale at a price to be fixed when the value of the property is determined, such price to be approved by Group No. 1. This would indicate that the actual ownership of Texon of Delaware in Group No. 1, at the present time, excluding the 363 shares in question, is 661½ shares, or approximately 32 per cent.

The District Court order was rendered under an agreement reached in El Paso after day to day court moves made for a week. H. C. Hanszen and J. P. Scranton, both stockholders, of Houston, had obtained a temporary injunction restraining the holding of the annual meeting, May 5, as originally scheduled.

After the court ruling had been entered, complainants said that in general they had been given every relief asked except the further postponement of the annual stockholders meeting, which the administrative heads of the company proceeded to hold, May 13.

At this meeting, Haymon Krupp was re-elected president; Frank T. Pickrell, vice president and treasurer; Elias G. Krupp, secretary; and John M. Wyatt, vice president and assistant secretary. Directors elected were Nathan I. Sachs, Texon attorney; Carl G. Cromwell, of Big Lake, Texas; Claude B. Hudspeth of El Paso; A. C. Rishel of New York; and Frank Gordon of El Paso

Messrs. Hanszen and Scranton, together with members of the Stockholders' Protective Committee having headquarters at 120 Broadway, New York, did not participate in the annual meeting Wednesday afternoon. This was because of an injunction secured at Wilmington, Delaware, where the federal court was reported in a telegram from New York to have enjoined the meeting and to have appointed a receiver for 1,400,000 shares of stock standing in the name of Carl G. Cromwell, or stock in the name of Levy Brothers, and the personal stock of G. A. Loomis. Later advices from Wilmington were that Benjamin N. Brown had been appointed receiver for this stock.

After reading the New York message to the stockholders meeting, members of the Protective Committee withdrew from the annual session.

Action at Wilmington was taken in a federal court suit filed April 27, last, by William A. Schenck of Meriden, Conn., who described himself as a retired manufacturer and declared the proceedings were in behalf of all stockholders.

The Wilmington suit was brought against the Texon Oil & Land Co. of Delaware; against Haymon Krupp, president; Frank T. Pickrell, vice president; Nathan I. Sachs, Texon attorney, as officers thereof; G. A. Loomis & Co., New York brokers; Carl G. Cromwell; the Group No. 1 Oil Corp., and the Group No. 2 Oil Corp.

Schenck's Suit Described

Schenck's suit was described by him in a letter to stockholders in this wise:

"The relief prayed for, in brief, is that one million shares of stock, issued in August and September, 1924, and an additional 1,400,000 shares recently issued, be cancelled, and that the intercorporate relationship between the Texon company and its so-called subsidiaries be thoroughly investigated."

After the District Court at El Paso had issued a temporary injunction, May 4, certain records of the Texon of Delaware were delivered to the attorneys involved in the proceedings. These disclosed a contract dated March 26, 1924, which provided that Carl G. Cromwell drilling contractor, was to receive 2,400,-000 shares of stock as compensation for drilling eight wells validating permits of the Texon and affiliated companies

(Continued on page 71)

(Continued from page 66)

in the University lands of Reagan county, Texas.

This stock was to be issued, according to the contract, in installments, as each well was completed; on a basis of 300,000 shares for each well. The contract was signed by Cromwell and Pickrell and witnessed by Nathan I. Sachs.

Second Contract Signed

A supplementary contract made on the same day stipulated that Cromwell was to assign the stock in blank and deliver all of the 2,400,000 shares to Sachs, this stock to be held in escrow for two years, with the proviso that in event an agreement was made for the sale of said stock with G. A. Loomis & Co., then all stock purchased under such agreement was to be delivered by Sachs to Loomis and proceeds of sale were to be deposited in a bank mutually agreed upon by Pickrell and Cromwell.

Complaints at Meeting

The Stockholders Protective Committee was represented at El Paso by Mr. Hanszen and D. J. McAuliffe, the latter complainant in a federal court proceeding filed at Dallas recently. That suit asked for the disclosure of facts pertaining to the affairs of the Texon of Delaware and its affiliated group companies, and sought an accounting. W. G. Skelly, president of the Skelly Oil Co., Tulsa, and Holland S. Reavis, of 120 Broadway, New York City, members of the Protective committee, were not present.

Judge R. L. Batts, formerly general counsel of the Gulf Oil Corp., and its subsidiaries in the southwest, appeared for the Protective Committee, which was also represented by W. H. Burges of El Paso and W. M. Downing of Denver.

Clarence G. Wharton of the Houston law firm of Baker, Botts, Parker & Garwood, represented the Texon of Delaware, its affiliated companies and the individuals therewith.

Oil Man's Son is Singer, Composer

WATERLOO, IA.—Jack Little, who has been heard by radio audiences in the team of Little & Small, is the son of James Leonard, salesman for the Bartles-Shepherd Oil Co., Waterloo. Mr. Little is composer of several popular song hits of the year, among them being "Because They All Love You," "Where's My Sweetie Hiding," "Jealous," etc.

BENTON, ARK.—B. L. Drennan recently opened a drive-in service station here, handling Texaco products, according to B. G. Proctor, agent for The Texas Co. at Little Rock.

DENVER, COLO.—W. T. Crotzer, formerly with the Stevens Grease Co. of Kansas City, Mo., and more recently secretary of the Colorado Petroleum Club, has resigned the latter position and is now with the Denver Service Station Co., Denver.

Industrial Notes

Goulds Manufacturing Co., Seneca Falls, N. Y., manufacturers of many types of pumps, have just issued in booklet form a report on an investigation of the performance of centrifugal pumps when pumping oils, by Robert L. Daugherty, professor of mechanical and hydraulic engineering at the California Institute of Technology.

The tests were run with two pumps, a single stage and a three stage, and the results of the tests are shown by tables and charts. Those interested in the possibilities of adapting centrifugal pumps to various refinery uses will find much information in this report.

* * *

The Warford Corp., New York, manufacturer of the Warford auxiliary transmission for Ford cars, has developed a new type "Tee" auxiliary transmission which has four speeds forward and two reverse at the driver's option. The feature of the "Tee" design is the perpetual engagement of the transmission gears. This new model was designed primarily for the Ford model T chassis, and with special truck fittings, it can also be used on the model TT truck.

* * *

Ford Motor Co., Detroit, has put on the market a new light trucking unit, which is a combination of the standard Ford Runabout with rear deck replaced by a pick-up body. The body is all-steel, attached to the chassis frame, with rear door adjustable chains, side flanges and steel floor strips with sunken bolt heads. The inside dimensions of the body are 40¾ by 56 inches. Height from floor to top of flare is 13 inches.

* * *

American Manganese Steel Co., Chicago Heights, Ill., has just completed a new foundry for the manufacture of Amsco manganese steel castings at Los Angeles, Calif., giving it facilities for producing about 25,000 tons of manganese steel casting annually. It owns five other foundries, one each at Chicago Heights, New Castle, Dela., St Louis, Mo., Denver, Colo. and Oakland, Calif.

* * *

The Austin Co., Cleveland, O., engineers and builders, has moved its New York offices to larger quarters in the Equitable Bldg., 120 Broadway. The New York staff has also been increased. J. K. Gannett is district manager, with A. D. Engle and D. C. Raymond as assistants.

* * *

W. H. Jarrett, division representative of the Guarantee Liquid Measure Co., Rochester, Pa., manufacturer of Fry visible gasoline pumps, has opened offices at 1005 Peoples Bank Bldg., Indianapolis according to I. E. Jarrett, sales representative at Vincennes, Ind. for the Sinclair Refining Co.

The White Motor Co., Cleveland, O., has obtained the services of H. D. Church as director of engineering, effective May 15. Mr. Church was formerly chief engineer of the truck department of The Packard Motor Car Co., and for the past 18 months has been assistant chief engineer of The Chevrolet Motor Co.

George W. Smith, who was formerly in charge of the experimental and research department of the White Motor, has returned to the company as technical assistant to Thomas H. White, vice president and general manager, and will have charge of the technical division of the staff.

* * *

Charles Van Brunt and P. Schulyer Miller, of the research laboratory of the General Electric Co., Schenectady, N. Y., have invented equipment for reclaiming crack-case oil which removes the products of combustion, debris of wear, road dust and fuel dilutants from the oil, and returns to the oil its original lubricating properties. The company believes that the apparatus can be commercially developed so that reclaimed oil can be produced at a cost low enough to make its use by motor truck fleet owners advantageous.

* * *

Republic Flow Meters Co., 2240 Diversey Parkway, Chicago has put out a new catalogue describing its devices for the measurement of heat. This includes a short chapter on the application of the company's instruments to the various phases of oil refining, including cracking equipment and to boiler plants to indicate the degree of efficiency at which they are operating.

* * *

The Brunner Mfg. Co., Utica, N. Y., which is now manufacturing the Brunner No. 78 engine cleaner designed for use as a garage tool, reports sales of this tool to oil companies for use at service stations to lubricate springs and eliminate body and chassis squeaks, blow out gasoline and oil lines, etc. Its pistol grip makes it easy to hold without cramping the hand.

* * *

Dean Hill Pump Co., Anderson, Ind. has appointed the Stewart Machinery Co., 411 Buder Bldg., St Louis, Mo. as its dealer in that territory. E. C. Werner, of Woodlawn, Cincinnati, O. has been appointed representative in the Cincinnati territory.

* * *

Butler Manufacturing Co., with headquarters at Kansas City, Mo., has moved its Chicago offices from 1221 First National Bank Bldg., to room 1218, the same building, according to William C. Heimlich, advertising manager.

NEW OIL STATION CONSTRUCTION

Henderson, Ky.—Home Oil & Gas Co., composed of local stockholders, will erect filling station. Company will handle Parco gasoline and Faultless oils, according to G. D. Givens & Sons, agents for the Hawkeye Oil Co. here.

Bald Knob, Ark.—J. K. Jameson is completing bulk station here, to accommodate two car loads of oils and greases, and 30,000 gallons of gasoline and kerosene. Mr. Jameson will distribute Texaco products.

A sun parlor over the canopy is an unusual feature of this service station at Shelbyville, Ind., owned by O. M. Finks. Mr. Finks maintains his residence on the second floor. Besides gasoline and oil, Mr. Finks handles a complete line of automobile accessories

San Diego, Calif.—The Union Oil Co. of Califoornia has opened a new service station at Oceanside, Calif., and expects to add two new distributing stations to San Diego district during the summer, one at Ramona and one at La Jolla, according to L. H. Fish, district sales manager at San Diego.

* * *

Danville, Ill.—Mrs. Mary Gilmore, and son, John Gilmore, get permit from city to build drive-in filling station at Vermilion and Davis Sts., after seeking permit for three years. W. C. Johnson also granted permit for station.

* * *

Wichita, Kan.—Derby Oil Co., with headquarters here, is establishing distributing agencies of its own at Manhattan and Topeka, Kan. Service stations are being built at Oxford and Augusta, Kan.

* * *

Pensacola, Fla.—Sherrill Oil Co. is building stations at Gulfport, Miss., Greensville and Abbeville, Ala., according to J. H. Sherrill, president.

* * *

Bristol, Va.—Hal Harkrader building filling station, to handle Standard gasoline and kerosene, and Mobiloil.

* * *

Brodhead, Wis.—Harvey Jones to build filling station

Pocahontas, Ia.—Pocahontas Oil Co. building service station. Ben Lucas and Roy Greenwood building service station to handle Standard Oil Co. of Indiana products.

* * *

Tarentum, Pa.—Hall George building service station, according to Thomas D. Hudepohl, salesman for Waverly Oil Works Co. at Tarentum.

* * *

Derby Oil Co., Wichita, Kan. has leased property at Oxford, Kan., on which it will erect a service station.

* * *

Geneva, N. Y.—Malco Oil Co. building service station at Hall, N. Y., according to P. J. O'Malley, manager.

* * *

Chicago, Ill.—Barnsdall Refining Co., is building service stations at Maryville and Oregon, Mo.

* * *

Forest City, Ia.—John Valley to build filling station at Fourth and Secor St.

* * *

Waverly, Minn.—White Eagle Oil & Refining Co. to erect service station.

* * *

Fairmont, W. Va.—Freedom Oil Co. to build filling station.

* * *

Reyno, Ark.—Belford & Roe building filling station.

St. Louis, Mo.—J. O. Sampson, president of Trico Oil Co., is just having completed bulk station of 75,000 gallon capacity here. Station will handle various grades of paint and varnish makers' naphtha, in which company has specialized for past four years.

* * *

Derby Oil Co., Wichita, Kan., will build a service station at Wichita, at one of the main entrances to Riverside Park. It will be of a park villa type and rustic in appearance, in keeping with the park improvements.

* * *

Stover, Mo.—Fajen Oil Co. is building bulk station at Mt. Leonard, Mo., according to Otto Fajen, secretary.

* * *

Ryan, Ia.—J. P. Smith installing filling station in front of his garage, handling Sinclair products.

* * *

Pine Bluff, Ark.—R. A. Futch, proprietor of South End Drug Store, building filling station.

* * *

Long Beach, Wash.—E. R. Saunders of Ilwaco, Wash. to build filling station, costing $3,000.

* * *

Cushnell, Ill.—James Swink to install filling station in front of his business on Cole st.

* * *

Wooster, O.—H. S. Palmer to build filling station at Beall Ave. and E. Liberty St.

* * *

Spokane, Wash.—Union Oil Co. of California seeks permit for filling station.

* * *

Starbuck, Minn.—Leonard Pederson and S. O. Koland erectiing service station.

* * *

Woodlawn, Pa.—Cochran Electric Co. plan to build service station.

* * *

Wahpeton, N. D.—Standard Oil Co. of Indiana to build service station.

* * *

Yoakum, Tex.—R. S. Wilson bought property for filling station.

* * *

Ashland, Wis.—Consumers Oil Co. to build two filling stations.

* * *

Worthington, Minn.—G. W. Kinsman building service station.

* * *

Maddock, N. D.—A. J. Myhro to build service station.

* * *

Malvern, Ark.—A. J. Kight building filling station.

Tank Cars

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CAMBRIA STEEL TANK CARS

Operates Tube Stills On Bradford Crude; Eliminates Re-running

By Paul Truesdell

N.P.N. STAFF WRITER

BRADFORD, PA., May 21. THERE are a good many refiners who realize the superior efficiency of tube stills as compared with the shell type for skimming crude, but nevertheless believe that the field of the tube still is limited to those crudes the residue from which is used for cracking stock or as fuel. They believe that tube still distillation cracks or "burns" the oil to the extent that the value of the residue for making lubricating stocks is destroyed or at least impaired.

While the Pure Oil Co. refinery engineers, as stated in an article in an earlier issue of this paper, proved to their own satisfaction by tests on their tube still equipment at their Smith's Bluff, Tex., plant, that good lube stocks could be made from the bottoms of oil that had been distilled in the tube stills, the belief has been more or less general that the tube still was unsuitable for use in the western Pennsylvania refineries where the manufacture of lubricating oils is the chief consideration.

A long time ago, Alexander Lackman, refinery superintendent and research engineer of the Emery Manufacturing Co., here went to work to find out just how the high efficiency of the tube still system could be adapted to the needs of the Pennsylvania refiner. He found out.

Those who believe that Pennsylvania crude cannot be successfully handled that way are hereby respectfully referred to Mr. Lackman. For a year and a half now, he has been skimming crude in two tube still installations designed by himself entirely and built under his careful supervision.

Building More Tube Stills

These two units are working so successfully that the company right now is building two more of larger capacity in which Mr. Lackman expects to work out some important improvements. Here is what Mr. Lackman says his new process is doing:

1. Increasing the yield of gasoline from the crude by about six per cent.

2. Cutting out the rerunning of all the light oils entirely.

3. Reducing the time necessary to run down a given batch of crude by 50 to 60 per cent.

4. Making it possible for the refinery to run 45,000 to 48,000 barrels of crude a month as compared with a maximum of 34,000 barrels a month by the old system.

5. Making it possible for the plant to produce better cylinder stocks than it could make under the old method of refining.

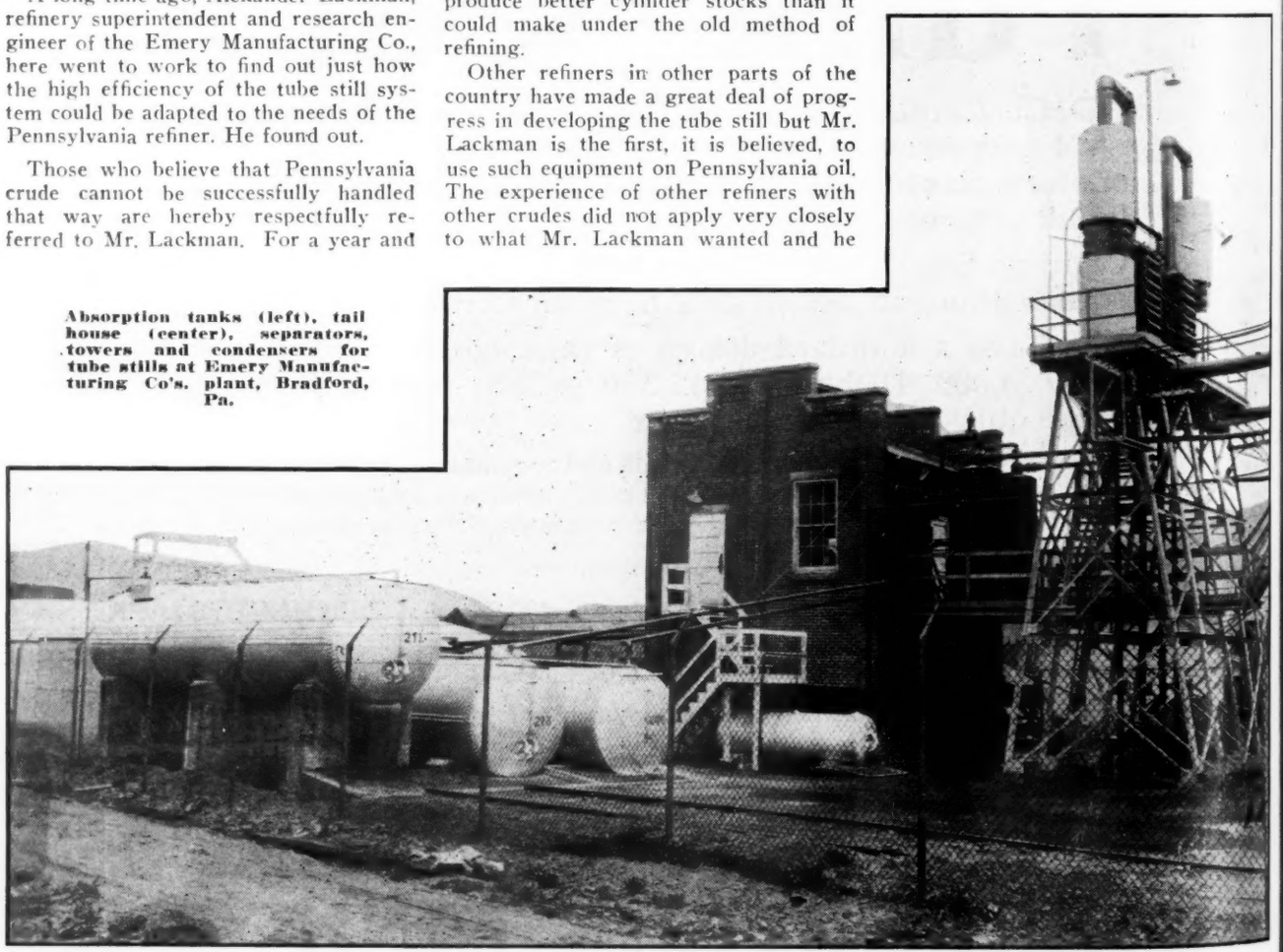
Other refiners in other parts of the country have made a great deal of progress in developing the tube still but Mr. Lackman is the first, it is believed, to use such equipment on Pennsylvania oil. The experience of other refiners with other crudes did not apply very closely to what Mr. Lackman wanted and he had nothing, practically, to serve as a guide. He developed the still according to his own ideas, putting in many features that are believed to be entirely new.

In the first place, he does not use the usual combination of a tube still and expansion drum or evaporator and he does not attempt to vaporize as large a percentage of the oil as possible in the tubes, as is the usual tube still practice. He keeps his temperature down. That is one of the most important points, he says.

The accompanying drawing shows the layout of his two units.

Description of Tube Still Unit

To take each unit singly. It is made up of the tube still and its furnace hooked up with a big shell still, a tower, condenser, separator and a powerful feed pump. Even in designing the tube still itself, Mr. Lackman has departed entirely from the usual design which generally calls for a furnace divided length-



Absorption tanks (left), tail house (center), separators, towers and condensers for tube stills at Emery Manufacturing Co's. plant, Bradford, Pa.

wise in the middle by a bridge wall, with the combustion chamber on one side of the wall and the tube banks running lengthwise, on the other.

Mr. Lackman's unit has the combustion chamber, fitted with two oil burners, in front and the tube chamber in the back, the tubes running crosswise of the furnace instead of lengthwise. There are 72 of the tubes, of 3½-inch diameter and 13½ feet long, and they are arranged in banks of four each, one bank above the other.

The principle of countercurrent flow is followed, the relatively cold oil coming in at the bottom of the tube bank where the spent gases that have given up most of their heat are going out to the flue, the oil gathering heat as it flows upward in the pipe coil, stripping the gases of their heat as it goes and going out at the top where it is in contact with the gases at their hottest point.

This is in accordance with the latest tube still practice everywhere but another difference between Mr. Lackman's and the ordinary tube still plant is that his system runs by batch instead of continuously.

He also has a method of his own of reclaiming the gasoline out of the uncondensed gases which will be described later. Here is the way the tube unit operates.

Interior of the tailhouse of the new tube stills at the Emery Manufacturing Co.'s plant, Bradford, Pa.

How It Operates

The 1200-barrel shell still is charged with crude oil. Then the tube still furnace is fired and the pump that feeds the tube is started. This is a big Viking rotary pump direct-driven by a 40-horsepower electric motor and capable of delivering 700 gallons a minute. It is really a circulating pump, drawing oil out at the bottom of the shell still and forcing it at high speed through the pipe coils in the tube still and returning it to the shell still again. All the oil that goes into the tube still comes from the shell still and goes back into it. The 1200 barrels of crude oil will circulate through the tube furnace in an hour and 12 minutes.

The speed of the oil traveling through the tubes is about six feet per second and it is to this high velocity that Mr. Lackman attributes the fact, that the oil is not burned in the process. It takes about three hours to get the crude from atmospheric temperature up to the temperature at which the vapors begin to come over, which is 150 to 160 F.

When the stream coming over in the tailhouse reaches 64 to 65 gravity, steam is turned into the shell still, slowly at first, by cracking a two-inch valve. This admits the steam, which is under 40 to 45 pounds pressure in the steam line. The amount of steam is gradually increased as the distillation goes on. The steam is admitted in the conventional way through a perforated pipe running along the bottom of the still.

After traveling through the 72 tubes, making a total length of travel of about 1000 feet, the hot oil and vapors are led through a six-inch line into the bottom of the shell still, entering the latter a few inches from the bottom running through the entire length of the still.

On the underside the pipe is pierced with rows of three-eighths inch holes. These holes furnish the only means of escape for the hot oil from the tube still and the small size of the hole assures that it must come out in small bubbles and bubble up through the mass of the oil to the surface. Thus the big body of oil in the shell still is slowly heated and acts as a temperature regulator. It also performs something the same function that the pans of liquid do in a bubble tower, that is a scrubbing action.

Oil Acts as Scrubber

The tendency of the mass of oil is to take all entrained oil out of the vapor bubbles and also to condense and absorb the heaviest ends of the vapors, while the tendency of the light vapors in the bubbles is to pick the lightest fractions out of the oil as it passes upward.

Frequent recirculation of the oil through the heating zone, the tubes, is relied upon by Mr. Lackman, rather than high temperature, to get his results. He says that the temperature balance between the mass of oil in the shell still and the tube still is so perfect that the rise in temperature of the oil going out of the tube still is only 10 to 12 degrees as compared with the temperature of the same oil when it goes into the bottom bank of the tubes.

Rising through the oil in the shell into the space above the surface, the vapors are led through a 12-inch vapor line to a tower. This is composed of two drums, well insulated, 42 inches in diameter and six feet high, set one on top of the other with a Southwestern separator section, air cooled, between them. Each of the drums contains three trays packed with hollow tile and there is considerable open space between the trays.

The vapors from the still enter the bottom of the lower drum. Here the speed at which they are traveling is reduced so that the first thing that happens, probably, is that the entrained oil, brought over mechanically, drops out. Next the heaviest ends of the vapors, unable to withstand the temptation offered by the slowing up and the surface afforded by the trays and the hollow tile, condense immediately and drop to the bottom of the drum.

The rest of the vapors make their way toward the top of the drum, more and more of the heavier fractions condensing until only the light and the intermediate vapors are left. The latter get a knockout when they hit the separator section and only the light vapors survive to reach top of the upper drum in the vapor state and pass over the top.

The Condenser System

From the top of the tower, these vapors go into the condenser which is of the enclosed type, Southwestern condenser section being used altogether. The heavy ends which condense in the drums and separator are refluxed into the shell still. The condensers are cooled by good well water which enters the system at 46 to 48 F. The lightest gasoline which is condensed and runs to the look box in the tailhouse, has 88 to 90° gravity and 46° F. temperature.

From the condenser, the condensate together with the uncondensed gases, go into a separator, which is a vertical, tank-like affair three feet in diameter and eight feet high. Here the gases, the gasoline and the water resulting from

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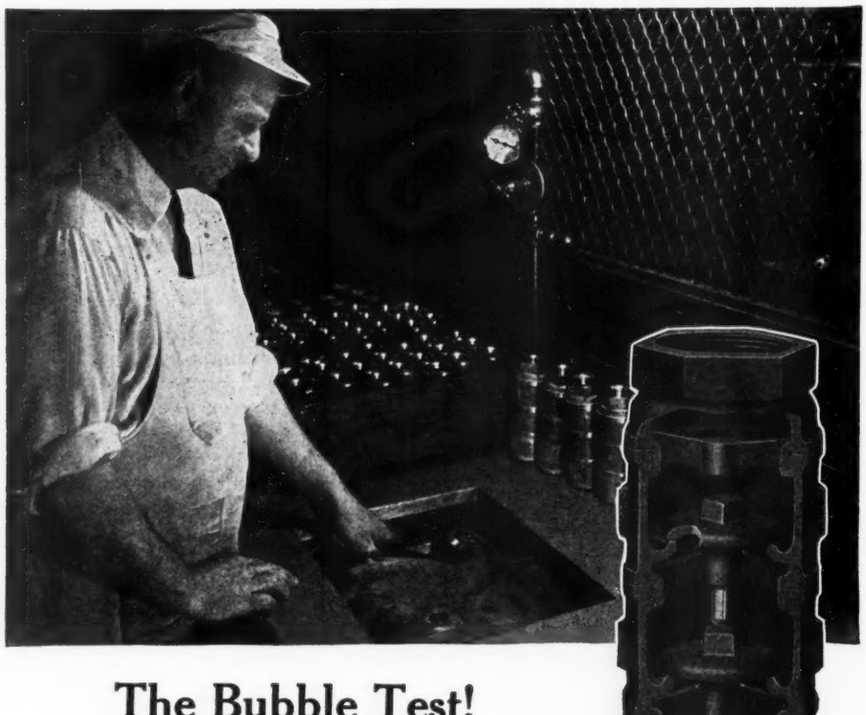

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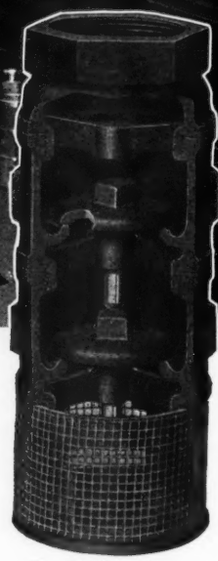

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the condensation of the steam used are separated. The water is continuously drawn off at the bottom and goes into a drain, the gasoline is taken off near the middle of the separator and runs through the condensate line into the tail house and the uncondensed gases are led off at the top. Water, gasoline and kerosene contents are shown by two separate gauge glasses.

The stillman in the tail house has Schaeffer & Budenberg Columbia gauges which keep him at all times informed of conditions in the stills. One of these recording theromometers shows the temperature of the oil in the shell still, one indicating theromometer the temperature at which the oil enters and another the temperature of the oil leaving the tube still, one pressure recorder shows the pressure in the still, which is nearly atmospheric pressure, another shows the pressure of the oil behind the pump going into the tubes of the furnace, which is generally 10 to 12 pounds.

A rise in the pressure would indicate the clogging up of the apparatus and the furnace would be shut down before there was a rupture caused by pressure building up. This never happened in one and a half years continuous running.

The method of handling the uncondensed gases from the separator to get the utmost amount of gasoline out of them is interesting. This is accomplished by three absorption tanks, as Mr. Lackman calls them. These are horizontal tanks, six by 30 feet and holding 150 barrels each.

The Absorption System

Each is charged with 100 barrels of heavy naphtha, 52-gravity. Each of the stills has a No. 1 tank of its own and there is a mutual No. 2 absorption tank for both of them, about five feet higher.

From the top of the separator the gases are led through a three-inch line into the lower first tank. This line enters the tank as the hot oil line from the tube still enters the shell still, near the bottom, and it runs the full length of the tank. It also is perforated along the underside with very small holes through which the gases bubble up to be absorbed by the naphtha.

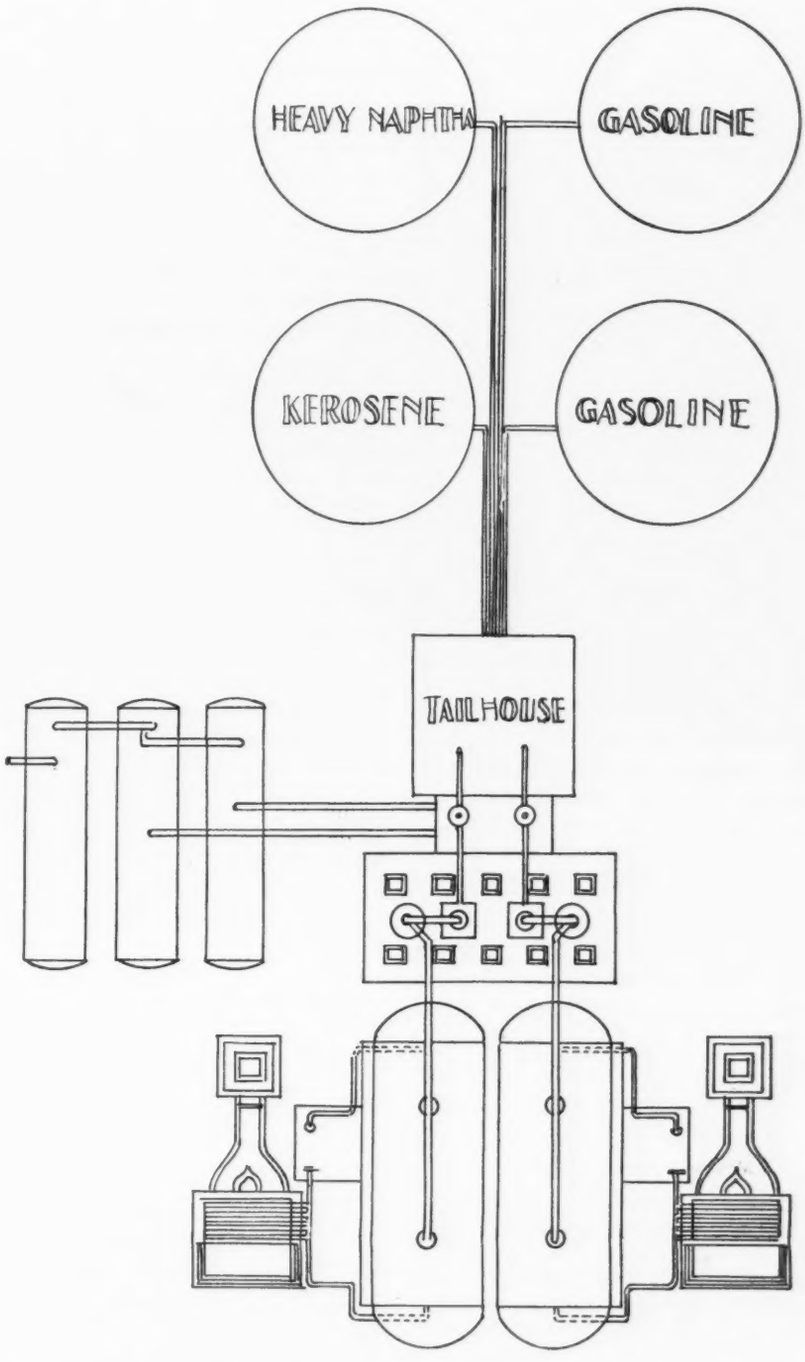
The gas line enters one end of the tank. On top of the tank at the opposite end a three-inch pipe comes out and leads into the bottom of the higher No. 2 tank, running the full length of the tank, and perforated in the manner described. The light gases that have escaped absorption in No. 1 tank again are subjected to the scrubbing action of bubbling up through the naphtha. There is a check valve in the line leading from No. 1 tank into No. 2 so that the vapors or naphtha from the latter cannot make their way back to the former.

The gases which are not absorbed by the naphtha find their place in the space above the surface of the naphtha in No. 2 tank. From there they are drawn out and sent to the burners under the tube stills, but there is generally only a very small blue flame to observe when the still gases are coming over.

Mr. Lackman says that the gases absorbed during the running of the first batch of oil raises the gravity of the naphtha in No. 1 absorption tank from 52 to about 55 gravity and the second batch run raises it to 57-58 gravity. After it has absorbed the gases from two runs and has reached this gravity, the absorption gasoline or naphtha in No. 1 tank is pumped out and mixed with straight run gasoline and is ready for shipment. Each run increases the volume of the naphtha by 12 to 13 barrels.

While the gravity of the naphtha is raised by the absorbed vapors and the initial boiling point of about 260° F of the heavy naphtha is brought down to 88 to 90° F., the end-point remains practically unaffected. The blending with straight run gasoline is necessary to raise the initial somewhat and lower the end point sufficiently to bring the product within the distillation range limits of good gasoline. The so-called absorption gasoline in tank No. 1, however, is water white—No. 25 color and very sweet. It has a pronounced aromatic smell, still predominant when mixed with the straight run gasoline, ready for shipment.

(Continued on page 80)



Plan of the tube still installation at the Emery plant. In the center foreground are the two shell stills with a tube still with its furnace, tubes flue and stack on either side. The vapor lines from the shell stills are shown leading to the towers, condensers, separators and the tailhouse in the background. On the left are the absorption tanks where the gasoline from the non-codensible gases is absorbed into naphtha

News from State Associations

Montana Has Its Own Organization

GREAT FALLS, MONT., May 21 THE Montana division of the Rocky Mountain Oil & Gas Association was formed here recently, with headquarters at 222 Ford Bldg., Great Falls. Walter F. Brittan has been appointed full time paid secretary.

Membership is open to all oil men, producers, refiners and marketers. After a general meeting held recently when many prominent oil companies and oil men became charter members, the board of directors convened and elected the following officers:

A. Judson Findley, vice president of the Western Petroleum Exploration Co., president; M. C. Henderson, Sunburst Refining Co., vice president; E. B. Coolidge, president Homestake Oil Co., vice president; H. Earl Clack, president of H. Earl Clack Co., vice president; A. D. Becker, treasurer.

Directors include, besides Mr. Findley, Mr. Henderson, Mr. Coolidge and Mr. Clack, J. H. Clark, manager of Mid-Northern Oil Co.; A. E. O'Brien, Lewistown refining Co.; L. B. O'Neil, International Refining Co.; C. H. Brown, acting sales manager, Arro Oil & Refining Co.; Thomas Arthur, Continental Oil Co.; G. I. DeSchon, Montana Oil Journal.

The general executive committee is composed of Mr. Brown, Mr. Arthur, Mr. Henderson, Mr. Clack, Mr. O'Brien and Mr. DeSchon.

The producing, refining and distributing divisions of the association will be represented by group committees, with the three vice presidents acting as chairmen of their respective committees. Members of these committees were to be appointed at a special meeting of the executive committee called for May 16 at Great Falls.

The first annual meeting will be held at Great Falls on the Friday and Saturday of the week preceding Thanksgiving Day.

* * *

Missouri Jobbing News

NEOSHO. MO.—The Marble-Jenkins Oil Co. is one of the newest companies to start in this state. The company started in business recently in this city where Mr. Marble was formerly agent for the Marland Refining Co.

* * *

George. S. Allee, secretary of the Missouri Oil Men's Association was recently appointed secretary of the Kansas City Oil Men's Club.

Collective Buying For Okla. Jobbers

A COLLECTIVE buying department of the Oklahoma Oil Jobbers Association, which will be known as the Oklahoma Oil Jobbers Association Collective Buying Co., Inc., with headquarters at 416 Fidelity National Bldg., this city, has been created for the purpose of enabling the small jobber as well as the large one to purchase his gasoline and oil requirements at the low market price, according to C. M. Kinney, secretary.

C. H. Dresser will have charge of this department, but it will be under the direct supervision of Mr. Kinney and the board of control of the association. Mr. Dresser is an experienced marketer, having been with the Anderson-Pritchard Co., in charge of their tank car sales department.

One of the features of the new dedepartment will be a display room which jobbers will endeavor to make a clearing house for Independent jobbers. A special display room for samples and literature will be maintained, and samples of oils and greases, advertising matter, catalogs, and anything that would interest jobbers, are being solicited.

Manufacturers of new inventions small appliances, unique display cards, etc., which might interest jobbers, are invited to send in their material which will be placed before members of the association. The collective buying department will act as agent for manufacturers and oil companies who send in samples. The service is not limited to Oklahoma jobbers, but will be extended to any part of the country, according to C. H. Dresser, who will have charge of the department.

The department will be under the direct supervision of Mr. Kinney and the board of control of the association.

* * *

Hugo Hoevel, manager of the City Service Oil Co., and vice president of The Oklahoma Oil Jobbers Association, has just completed moving his office from Oklahoma City to Tulsa. Mr. Hoevel recently returned from a survey of Missouri and Kansas. These states, as well as Oklahoma and Arkansas are under his jurisdiction.

* * *

W. H. Gilreath, manager of the Palacine Oil Co., Ardmore, was a recent visitor at the office of the secretary of the jobber's association. Mr. Gilreath, who is the hustling manager of his company operates in the southern part of Oklahoma.

* * *

Wesley I. Nunn, manager of the retail marketing department of the Marland Refining Co., Ponca City, has fully recovered from his recent illness and is back on the job.

* * *

The board of control of the Oklahoma oil jobbers association met at Oklahoma City recently to discuss matters pertaining to the activities of the association for the balance of the year.

Philadelphia Oil Trades Hold Outing

PHILADELPHIA, |May |22.—About 125 persons attended the annual outing of the Oil Trade Association of Philadelphia, which was held on May 14 at Kugler's Roost, better known as the Old Mohican Club on the Delaware. A number of oil companies along the eastern seaboard were represented, as well as both the New York and Baltimore oil trade associations, according to Joseph M. Patterson, of Joseph M. Patterson & Co., Inc., Philadelphia.

A shad dinner, served at 2:30 was a feature of the afternoon, during which time delegates had an opportunity of discussing prospects in the industry.

Oil Companies Invited To Safety Meeting

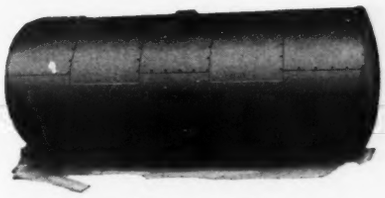
WASHINGTON, May 14.—The great petroleum producing and refining companies have been invited by the secretary of the interior to participate in the Fourth International First Aid and Mine-Rescue Contest which will be held at Springfield, Ill. Sept. 10, 11, and 12, 1925, under the auspices of the Bureau of Mines. The matter of safer working conditions in the oil and gas industries has recently been given considerable attention by the Bureau of Mines, whose mine-rescue cars have visited the larger producing regions in order that the crews of the cars might give first-aid instruction to the employes of these great enterprises.

Much enthusiasm for first-aid and safety instruction has been aroused among employes of oil and gas companies, and first-aid teams organized in the oil fields have attained great proficiency. The Mid-Continent Oil and Gas Association has manifested much interest in this safety work.

Oil Man's Son Killed in Accident

ST. LOUIS, Mo.—Norman Bassett, only son of Norman M. Bassett, Illinois representative for the Roxana Petroleum Corp., was instantly killed and Mrs. Bassett seriously injured in an automobile accident near Fredericks-town, Mo., on May 16. Norman M. Bassett is well known to many jobbers and was formerly with the old Anderson & Gustafson Co., according to Kenneth C. Baker, salesman for the R. J. Brown Petroleum Co.

Super-Riveted-Welded



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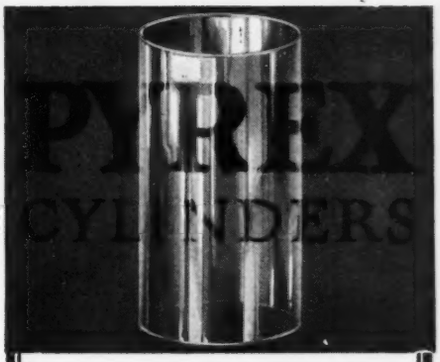

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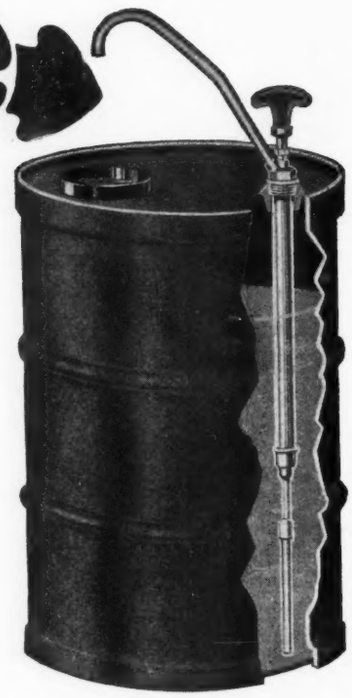

MAKING it easier and more convenient for people to use your product means more sales for you.

Furnish this useful, handy barrel pump to your factory, garage and rural trade. They will appreciate your progressive service policy in supplying it.

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(Continued from page 77)

When the absorption gasoline is pumped out of No. 1 tank, the naphtha from No. 2 tank, which is little changed from its original condition, is run into it by gravity and No. 2 tank filled with fresh naphtha, the process is then repeated. Mr. Lackman figures that the absorption tanks give about 150 to 160 tank cars a year of a very fine grade of 58 gasoline from gases for which before no better use could be found than to burn them under the boilers.

Only three products are taken off from the crude in the tube stills, light gasoline, heavy naphtha and kerosene. When the kerosene is off, the temperature of the oil is about 440 to 450° F. The circulating pumps are well able to handle the oil at this temperature being guaranteed up to 600 F. When the stream in the tailhouse reaches 44 gravity, the burners in the tube still furnace are shut off and the distillation is finished down to 43 gravity with steam alone. It takes about 26 hours to run down a batch of 1200 barrels Bradford crude.

When the furnace is cooled off, after two or three hours, the residue in the shell still, which then has a temperature of about 430 F., is pumped into the old crude stills which are of shell type. The oil reaches these stills at about 400 to 410 F., about 20 to 30 degrees being lost in the transfer. In these stills gas or fuel oil and wax distillate are distilled off and the bottom run down to 600, 635 or 650 steam refined cylinder stock. The wax distillate is handled in the regular way.

Mr. Lackman Compares Results

Here is the way Mr. Lackman compares the results obtained with his tube stills with the results under the old system. At that time, there were seven 600-barrel shell stills used for running crude oil off to cylinder stock and their maximum capacity was about 34,000 barrels a month. The two tube stills are running between 45,000 and 48,000 barrels a month, and only about half of the old stills are needed for running the hot butts from the tube stills off to cylinder stock.

Further, under the old system, the same cut was made for benzine that is made on the tube stills—that is from start to 54 gravity. On the shell stills this cut had a gravity of 61.8 to 62, an initial boiling point of 122 to 124 and an endpoint of 476 to 480. All of it had to be rerun or steam refined to bring it to initial and endpoint specifications.

The same cut from the new stills has a gravity of 64.5, an initial boiling point of 110 to 112 F. and an endpoint of 408 to 410 F. Likewise all the naphtha cut and the kerosene cut had to be rerun under the old system. With the tube stills, the naphtha cut has a gravity of 52.2 to 52.4, an initial boiling point of 260 F. and an endpoint of 446 F.

The kerosene cut has a gravity of 45.2 to 45.4, an initial boiling point of 374 and an endpoint of 576; it is of water white color and has no blue cast. None of the products of the new stills are re-

run. If the two tube stills have done nothing else they have cut out the rerunning of about 15,000 barrels a month, Mr. Lackman points out.

Because of the fact that the crude contains a small percentage of sulfur, it is necessary to give the products a light acid treat in order to make them sweet.

The only mishap that has occurred in connection with the operation of the tube stills was a fire which broke out April 5. This fire is thus described by Mr. Lackman:

"The blaze was caused by a misunderstanding of orders the stillman gave the pumper who was to fill one of the 1200-barrel shell stills with crude oil. The order was to start the pump at 10.10 a.m. but the pumper understood the order as '10 to 10.' The six-inch Taber rotary pump fills the shell still in about one hour and 10 minutes so at 11 o'clock the stillman thought that he had still 20 minutes time to finish the still to the mark.

"But a few minutes after 11 the still was already filled and a stream of crude oil shot high in the air through the gauge and safety valves; the stream fell on the manhead of the other still which was running off the kerosene cut at about 440 F. It flashed when it hit the manhole cover and soon a lake of burning crude oil surrounded the stills, pumps and tailhouse."

Mr. Lackman was not at the plant at the time but when he heard the factory whistle he ran out of his house, and Mr. McCambley, owner of the Ideal Garage, hurried him to the plant.

When he got there Mr. Lackman saw that the fire had spread to the beforementioned absorption tanks and was blazing at a smaller slop tank into which the stillmen dump the samples they take from the condensate. Mr. Lackman grabbed the nearest hose, dragged it behind the tailhouse and played it first on the absorption tank and then on the small slop tank.

He succeeded in checking the fire there and in cooling the tanks down. When the blaze was over, the paint on the tanks was blistered and the wooden wheels on the gauge glasses at one end of the absorber tank nearest the fire were burned off.

The gauge glass, of course, contained a column of naphtha to show the height of the liquid inside, did not crack and it seems that the four brass rods surrounding the glass tube to protect it from breakage absorbed enough of the heat so that the glass did not break.

As it was, the stairway leading to the tailhouse, window and door sill of the latter were burned away and some other damage was done but nobody was hurt and the stills could be operated again the next day.

"There can be no doubt," Mr. Lackman says, "that only the fact that all the apparatus was closed tight, prevented an explosion. The flames even shot through the window and door of the tailhouse and ignited the roof.

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Boosts Alcohol Sales With Visible Dispensing Equipment

By A. C. Carpenter
Lesh Oil Co., Ottawa, Kan.

Delivered before Kansas Oil Men's Association Wichita, Kan. May 14

I AM glad to say that all the oil men and most of the auto owners now understand crankcase dilution and realize that gasoline dilution is the only thing that thins down the oil in the crankcase. No matter how hot the engine gets or how much the oil is whipped or how long it is used, these things alone would make the oil thicker not thinner.

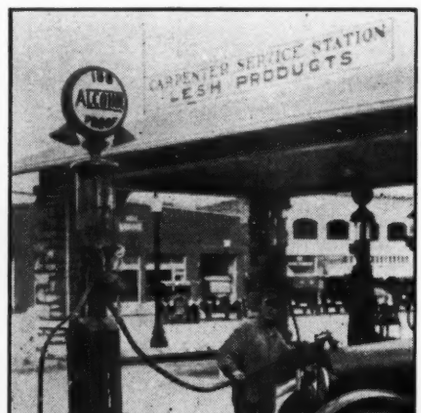
The Bureau of Standards made some extensive tests during the year 1924 and found beyond any doubt that the foregoing statements were true. They put oil, instead of water, in the cooling system of an engine and kept its temperature up to 212 deg. F., this meant that the engine was running much hotter than ordinary. At the end of a ten-hour run they found the oil in the crankcase had actually thickened up and that there was very little if any cracking, even though the temperature in the engine as well as the crankcase had been very high.

Others have run engines on a dry natural gas and found the same thing, because here there were no heavy ends to get past the pistons and thin down the oil in the crank case. Another way of showing that an oil does not break down, is to reclaim it from the crankcase.

Oil Changing

You often hear an auto owner say that he has just had a long, hot trip and wants his oil changed. You do not argue with him but do as he bids. Of course his oil would contain more carbon and dirt than before the hot trip and this alone would be a good reason for changing the oil, but he has the idea that the oil has been thinned down by the hot trip. Most likely the oil is a little thicker than before he started because the heating of the oil in the crank case would drive off some of the gasoline dilutent. Besides a hot engine will let very little of the gasoline get past the pistons.

From this it is evident there might be,—notice I said might,—such a thing as an equilibrium of dilution. An oil that has had 1000 miles of hot driving might be thicker than it was at the first 300 or 400 miles of cooler driving. Every time a cold engine is started, a little gasoline gets past the pistons and continues getting past, at least until the engine gets heated up, and usually afterward, depending upon the richness of the mixture, the fit of the piston rings and the volatility of the fuel. If the crankcase is very warm it might evaporate the gasoline out as fast as it is added. Naturally the light ends of the gasoline will evaporate first and leave the heavy ends. This means that gasoline of high end point will dilute much worse than others and is one of the big



Blind pump with visible attachment marked for pints sold 119 gallons of alcohol one day.

reasons for recommending a high test, or low end point gas, especially for winter use.

In our laboratory, we have found that the diluent recovered from crankcase oils is more like kerosene than gasoline and it is certain that under normal conditions, a crankcase would never get hot enough to evaporate the heaviest part of this. Therefore, in almost all cases the dilution gets worse the longer an oil is used.

We hope that none of you still flush out the crank case with kerosene because a lot of it is sure to be left in for you cannot drain it all out of any car. We recommend a special Wash Oil which is about half light auto oil and half Paraffine Oil.

Summing up the foregoing points on crankcase dilution, we find that it is caused only by gasoline getting past the pistons. The amount getting past depends on the end point of the fuel, number of startings, use of the choke, set of carburetor, temperature of engine, fit of the piston rings and the thickness of the oil used. The frequency of draining depends not upon the brand of oil you are using but upon the amount of gasoline getting past the pistons, the amount of evaporation of gasoline out of the crankcase and to a small extent the original weight of the oil used.

We have tried something new this last winter that may look like just the opposite to what we preach. We put gasoline in some of the new, fresh oil before putting it in the crankcase. I dare say all of you think, "What foolishness, you have just been talking about draining the car so as to get rid of gasoline." I'll show you our theory.

Winter Dilution for Fords

Have you noticed how hard a Ford is to crank in zero weather, even though you may have zero cold test oil of only 200 viscosity in the crankcase? In a Ford, the entire fly wheel, magneto and clutch bands dip in the crankcase oil and, while a Texas oil may run at near zero, it gets thick like molasses and makes the machinery very hard to turn. This is especially true just after it has been drained and a new oil put in.

The thought occurred to me why not dilute this new oil with some high test gasoline to thin it down. It will still be plenty heavy enough unless the engine gets very warm and when it does get hot the high test gas will evaporate out and automatically thicken up the oil when it needs it. If it again gets too thick and cranks hard, add a little more high test to the crankcase. An engine usually runs cool in the winter, so this thinned oil answers very nicely and, as pointed out above, the high test gas will evaporate out very easily if the weather should warm up. We still recommended draining the crankcase at least every 500 miles because it is the

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PRACTICAL HELPS

BUILDING up alcohol sales at service stations by advertising this service and handling the commodity through a pump, just as gasoline is sold, was described by A. C. Carpenter, Lesh Oil Co., Ottawa, Kans., before the Kansas jobbers in convention at Wichita, May 14. A scheme for treating the motor oil in a Ford to make it easier to crank in cold weather was also related by Mr. Carpenter, who is a long-established Kansas jobber. A good share of his talk at Wichita is published here.

heavy ends of the gas from the cylinders that dilutes the oil and these heavy ends will not evaporate automatically like the pure high test gas but will keep accumulating and thinning down the oil to the danger point.

Alcohol for Dodge

Another stunt that we tried with good success last winter was to put about 4 ounces of alcohol in the crankcases, especially in the Dodges. Perhaps you have noticed that Dodge cars seem to accumulate water in the crankcase in winter. The pump is at the very lowest point and the oil pipe is outside where it freezes easily and stops or breaks the pump. A little alcohol will mix with this water and keep it from freezing.

You may ask, why do we find more water in the winter than in the summer? For three reasons; first,—any cold parts of the engine will condense water out of the atmosphere like a pitcher of ice water; second,—the products of any combustion are water and CO_2. When the engine is hot this water passes on out as steam but when it is cold this steam condenses into water and will get past the pistons into the crankcase; third,—in the summer time the crankcase will be so warm that any water that might get in will be evaporated but in the winter it will keep on accumulating and thus cause trouble unless the crankcase is drained very frequently or a little alcohol is added.

Radiator Service

Winter is usually a slack time at a filling station so I fail to see why all you oil men do not push radiator alcohol. Perhaps you do, but if the drug stores still sell any, you are not getting all you should have. A drug store will not drain a radiator and usually will not test the solution afterwards. If you will run little ads on the front page of your local paper during all the first half of the winter and then give a real honest-to-goodness, cheerful, radiator service, you can get the alcohol business of the town.

At our station at Ottaway, we will sell 50 to 70 gallons of alcohol most every cold day at $1.00 per gallon too, and one cold Sunday we sold 119 gallons, all put in radiators. We often have four or five men at one station just as busy as they can be testing radiators and refilling when necessary. We use a battery syringe to draw a small sample from the radiator and always use a tester with a thermometer and correct for temperature. This takes just a little more time but is much more accurate and also gives your customers more confidence in your work.

We have installed underground tanks for alcohol together with a visible pump, the same as gasoline. The only difference is, you should use a five-gallon visible so the markings will be more accurate. We put a five-gallon visible attachment on an old blind gasoline pump but first re-marked the bowl very accurately to pints, used a Niagara Meter and thus we can put the nozzle in the radiator, watch the visible bowl and run in any quantity we need.

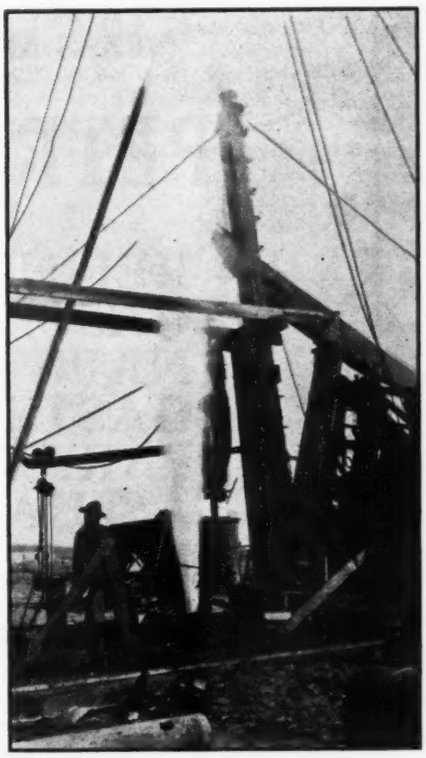
World's Highest Grade Crude Oil is Produced in Quantity

Staff Special

DENVER, May 22

EVERY little while the writer answers letters containing this question, "What is the highest gravity crude oil produced and where is it?"

Unless someone comes along with a better answer, the reply will continue to cite the oil produced on Rattlesnake dome, New Mexico, as the highest gravity oil in the world. This development has been under way for going on two years but came into its fullest bloom in 1924. On April 1 the refinery which handles a part of the production was put into operation.



This is not gas or water. It is the oil flow from one of the wells on Rattlesnake Dome, New Mexico

Some of the oil that has come from this field, which is located on Navajo Indian lands in San Juan county, northwestern New Mexico, is better than 70° Be. It has been customary to refer to it as 64°, but actually it is much higher, according to officials of the Continental Oil Co., which owns the field jointly with the Santa Fe Petroleum Co. The latter company, which is headed by S. C. Munoz, of New York, bought the entire geological structure known as Rattlesnake dome at the public auction in Santa Fe in 1923. After proving the tract to be productive, the company sold half interest to the Continental Oil Co., then the Mutual Oil Co., the agreement of sale providing that the Continental was to have charge of development and was to provide pipe line and refinery outlet for the crude.

Whatever theories may exist as to the origin or present form of this oil, it is without doubt the most peculiar ever found. Anyone visiting the field can get relief from the New Mexico heat if he can persuade the company to open one of the wells. The relief would be too great, however, as the oil comes out at a temperature of 5° above zero. It averages, as it comes from the well, 65.5° Be.

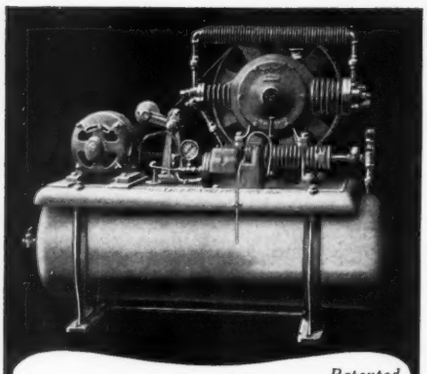
In its natural state, it is frequently used in automobiles and trucks. Refining improves it as engine fuel, as any foreign matter that might be mixed in with the crude is eliminated.

The company built a refinery at Farmington to top the oil and found that it is all top. The recovery of gasoline of about 65° Be. is 85 to 90 per cent. The rest of it is not fuel, it is simply loss in the form of extremely "wild" vapors. This refinery was built with one still and bubble tower. The still was filled with oil and fire started. Crude oil was introduced through the bubble tower. None of it ever reached the still, as the vapors which were coming over were hot enough completely to vaporize the new crude.

In the field, the crude has to be weathered off to some extent before the pipe line pumps will handle it. A 1,000-barrel tank filled with crude was let stand one night with the manhole cover open. It lost 110 barrels of oil. This was said to have tested 73° Be. before weathering and to have lost 10° in that night.

Nine wells have been drilled on the 4,000-acre lease and eight of them have been productive. Initial productions have run from 350 to 1,250 barrels. It is considered that something like a thousand acres have been proven by the drilling. Development is not being rushed nor are the wells permitted to produce in excess of what the market will stand, and that means a rather small production. This part of New Mexico is sparsely populated and the little refinery at Farmington, rated at 500 barrels daily capacity as ratings ordinarily go, more than supplies all the demand for gasoline in territory available to it. The only other outlet for the oil is to the north and it is not commercially feasible to ship it that way, as it is an expensive method, involving a chance from standard to narrow gauge rails and back again before it reaches refinery. Outages on this crude would be enormous. The operators plan to hold the field as a reserve for the territory, drilling and producing as the oil is required.

The field is located in T. 29 N-R, 18W, principally in Secs. 1 and 2. Drilling depths are from 700 to 800 feet and production is found in the Dakota sandstone.



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Solder, itself, has no durable strength. That's why buckets made the old way of soldering iron braces across the bottom is unsatisfactory. The bottoms soon sag, resulting in overmeasure.

MIDLAND improved buckets are built with specially designed dished bottoms, which give permanent strength. These bottoms, before assembling to the body, are tested to hold over 200 lbs. weight without buckling.

In addition to this safeguard, the bottoms are double-seamed to the body, which insures everlasting strength — with no possibility of over-measure.

There are no other buckets on the market with dished bottoms that equal the MIDLAND for strength and durability. This is a vitally important MIDLAND feature—of dollars and cents value to you.

Reason No. 2 will be featured in our advertisement June 10th.

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For Transmission and Differential Gears

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AMERICAN
Oil Corporation
Jackson, Mich.

Two Advances in Production Methods Described to A. I. M. M. E.

By A. F. Hinton
N. P. N. STAFF WRITER

TULSA, May 22

IN its last meeting before adjournment for the summer, the Mid-Continent section of the American Institute of Mining & Metallurgical Engineers heard two very interesting papers on subjects pertaining to improved methods and technic in oil field methods. These were "Cleaning Out Wells With Compressed Air," by R. A. Bonnell, of the production department, Tidal Oil Co., and "Use of Meters in Determining of Pay Strata In Oil Lands," by C. V. Millikan, petroleum engineer with the Amerada Petroleum Corp., and secretary-treasurer of the Mid-Continent section.

The meeting, which was held in the auditorium of the Municipal building, was well attended, and it was noteworthy that there were a number of production superintendents on hand as well as other interested listeners, in addition to the membership of the Institute. Institute officers have on the occasion of each meeting invited the entire petroleum industry to attend and are always gratified when practical production men show up and join in discussion of the papers.

A. F. Hinton, of National Petroleum News, member of the executive committee of the Mid-Continent section, presided, due to the unavoidable absence of John M. Lovejoy, chairman, Amerada Petroleum Corp., and R. S. McFarland, Twin State Oil Co., vice-chairman. It was announced that the visit of J. V. W. Reynders, president of the A. I. M. M. E., to Tulsa had been indefinitely postponed, but that F. F. Sharpless, secretary, probably would visit Tulsa during the summer.

Arthur A. Beard, manager of the production department of the Tidal Oil Co., accepted the assignment of telling his company's experience in cleaning out with compressed air, but on account of the fact that he could not be present, he turned the job over to R. A. Bonnell, who had all the necessary information, and proved a most acceptable substitute. His paper was followed with close attention, and at its close, he was subjected to a barrage of questions. James O. Lewis, of Smith, Dunn & Lewis, who designed the original portable air cleaning-out machine, and who gave the industry its first knowledge of it in National Petroleum News,* also answered questions relative to the design and engineering principles involved.

Probably the most striking part of Mr. Bonnell's paper was that in which he compared costs and time used in cleaning out wells with air as compared with drilling tools, in the Bartlesville-Dewey district, where the Tidal has a large number of old small-production leases. He stated that in this district, his company cleaned out 20 wells with the air machine, at an average cost of $237.50 per well, including fuel, labor, material, depreciation, and royalty paid to the company owning the machine. The average time used in cleaning out these wells was three days, including pulling rods and tubing and getting the well back on production. Using the last five wells cleaned out with cable tools in this district, the company records showed an average time of 51 days per well and an average cost of approximately $1,000. Production from the wells cleaned out with air increased on an average one and one-quarter barrels per well, on wells that had been producing about one-quarter barrel per day, he said.

Although the wells in the Bartlesville are comparatively shallow, the company had been equally successful in using air for cleaning out its Burbank wells, which are around 2900 feet deep, said Mr. Bonnell. Early in 1925, he said, the Tidal placed two air tanks on one of its leases there, obtaining air pressure from a stationary compressor, and tried out the device on these deep wells. He pointed out that the first well in a district cleaned out with air is likely to cause more or less trouble, until the conditions to be met with in the wells are known. It has been the company's experience, however, he stated, that after solving the difficulties in the first well, no further trouble was encountered. After having found out how best to use the machine on the first Burbank well, the second well was successfully cleaned out in three days, exclusive of pulling and putting the well back to pumping. The third well was cleaned out and put back to pumping in five days. The second well showed an increase of three barrels in production, and the third one increased two barrels. These wells had been making about 10 barrels daily each. The Tidal's experience had been that the average time of cleaning out Burbank wells with cable tools was 26 days.

Works Against Vacuum

In addition to the districts mentioned, the Tidal Oil Co. has cleaned out some of its wells in the Burkburnett field with the air machine, and while they had considerable trouble at first, are now cleaning them out successfully. The trouble there was due to the unusually open sand and a high back vacuum working against them. In this field, only a small amount of the lower portion of the sand is still producing oil, the upper portion being entirely barren. By using the ordinary air cleaning-out method, he said, the pressure was lost in the top portion of the sand, where the vacuum would pull it through. However, a special appliance was devised to overcome this handicap, and with its use they have been able to clean the wells out to the bottom very satisfactorily.

In fields where the pay sand is altogether at the bottom of the well, and the fluid stands only seven or eight feet in the hole, the air method of cleaning out is reversed, the pressure being put in the casing and the fluid, consisting of floating sand, shale, and oil, is flowed up the tubing. This removes all debris from the well and enables it to be pumped from bottom. The extreme softness of the Burkburnett sand, however, made it impossible to hold the pressure. The two wells so far successfully cleaned out at Burkburnett cost approximately $500 each, including fuel, labor, material, depreciation charges, and royalty.

Satisfactory Compressor Built

Mr. Bonnell told of the difficulties met in finding a suitable compressor which would be portable and would still be able to pump up to 500 pounds pressure in a short time. Finally a satisfactory machine was designed and built by the Chicago Pneumatic Tool Co., he said, and his company now has six of the machines in operation. He stated that the Ingersoll-Rand Co. and the Rix Compressed Air & Tool Co. also have designed and built portable air compressing outfits.

Inasmuch as results obtained through the use of these cleaning-out machines had not previously been generally known, the facts and figures given in Mr. Bonnell's paper are of great importance to the entire industry. Apparently the use of air or high pressure gas for this purpose is far ahead of other methods as a time and money saver and it will probably be generally used as soon as its advantages become widely enough known.

After this paper had been thoroughly discussed, another new idea was first given the light of publicity, when Mr. Millikan told of his experiments in the use of gas meters to determine the number and extent of pay strata in oil sands, to find the best pay, and to find the depths at which the strata were drilled through. Although the meters have been tried on only eight or 10 wells so

*National Petroleum News, Feb. 27, 1924, p. 61 and Aug. 13, 1924, p. 83.

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far, enough data have been assembled to show that much valuable information can be obtained through their use.

Mr. Millikan pointed out that in thin sands or in fields where initial productions are small, the depths of various pay strata can be determined with ordinary methods sufficiently accurate for all economic purposes. But, he said, in fields having thick sand bodies and wells of large initial production, especially where several wells are flowing through one separator or trap, it is difficult to determine the depth at which different pay "streaks" were found even with enough accuracy to guide the placing of shots, and small pay strata are liable to be overlooked altogether.

In order to study sand conditions more definitely, he said, the Amerada Petroleum Corp. has adopted the practise of measuring volumes of gas produced with the oil while the well is being drilled in. With the use of a sensitive recording meter, any change in the rate of flow of the gas is instantly recorded. Thus when a pay strata is drilled into the recording chart will show an increase of gas volume. When this increase has ended and the volume stops increasing, the well has drilled through that particular pay stratum. By determining the depth of the well when the first increase shows up on the meter and again when the rate of gas flow becomes constant, the thickness of each pay stratum can be determined as accurately as the driller can determine the depth of the well at various points.

Use Orifice Meter

The gas is measured with an orifice meter placed on the gas release line from the separator. Both Westcott and Foxboro meters have been used in the experiments. All gas coming from the well under observation passes through the meter except the small amount absorbed in the oil and passing out of the separator to the stock tanks. This amount would not be large enough, he said, to affect the results of the experiment. Numerous slides were presented, showing meter record charts of various wells while being drilled in. From these charts it is possible to make up graphic well logs of the producing horizon, showing variations in pay strata in wells close together. One such log showed that one Tonkawa well had six distinct pays, while its offsets had only two, although each had approximately the same depth from "top to bottom of sand" as determined by ordinary methods.

In addition to giving valuable information as to sand conditions, measuring the gas accurately by volume furnishes data on the ratio of gas to oil as production declines, and on operating conditions which tend to increase or reduce the gas ratio. Increasing the efficiency of gas as an expulsive agent is one of the most important problems now before the oil industry, and meter records of wells as described in Mr. Millikan's paper should prove extremely valuable in finding the solution.

Mr. Millikan summed up the information that can be obtained through meter

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records of gas production while a well is being drilled in, most of which is difcult to determine from hourly guages or action of the tools while drilling, as follows:

1. Depth and thickness of each pay is determined so as to indicate size and location of shots; indicates where plugs should be set for bottom water; and gives data which will permit a more accurate estimate of the well's ultimate production.

2. A record of operations while the well is drilling in is obtained.

3. Continued use of the meter will furnish information on the well which often will indicate a more efficient method of operation, not only for that well, but for all wells in which gas is the principal expulsive force.

"There is now being initiated," said Mr. Millikan, in closing, "a general research for methods of increasing the efficiency of recovery from oil sands, and if such work is to be successful in the future, dependable and accurate sand records will be of inestimable value."

Oil Companies Give Some Truck Fire Causes

CLEVELAND, May 22.—Light on what commonly causes fires in tank trucks is furnished by the facts gathered by two oil companies in the causes of such fires that have occurred in their equipment during the past year. One company operating extensively in Ohio, classifies the causes of its fires as follows:

"1—Fire likely caused from hot brakes or hot manifold igniting the gasoline. Loss, $3,450.

"2—Caught fire while being filled at station. No loss.

"3—Ignited by engine backfiring. Loss $250.

"4—Had cans of kerosene on the side of truck. One of the cans upset and the kerosene ran down over the muffler, setting fire to the truck. Loss $1,250.

"5—Apparently caused by static electricity. Loss $3,000.

"6—Ignited from unknown cause. Loss $201.

"7—Fire caused by tank of gasoline leaking and saturating the floor of the truck. Loss $400.

"8—Evidently ignited from some defect in the battery or the wiring and its close proximity to the gasoline tank which caused combustion. Loss $1,800."

Causes of truck fires reported by another company are as follows:

"1—Muffler cut-out jarred loose, throwing exhaust against frame which ignited the gasoline and oil with which the stake body was saturated. At this time the company was operating stake truck and delivering in 10 gallon cans and iron barrels.

"2—Driver claimed ignition occurred from auto inner tube attached to the faucet on the iron barrel. This faucet was inserted in the fill pipe of the underground storage tank. Later investigation disclosed that ignition was probably due to the fact that the driver struck a match to light a cigaret.

"3—Fire occurred while tank truck was being filled. It is claimed that this was due to static electricity but in opinion of the executive reporting this fire, it was caused by the tank being run over, the spilled gasoline igniting upon contact with exhaust pipe or else due to carelessness of the driver.

"4—Definite information lacking. Tank truck was involved in fire ignition probably being due to cigaret.

"5—This fire occurred in 1918. It was claimed that cause was due to static electricity but later information indicated that engine was not in proper condition and that the cause was probably due to back-fire.

"6—Truck was driven over embankment, ignited and was destroyed.

"7—Truck caught fire while pulling up a long hill. Cause probably due to the back-fire through the carburetor, as the carburetor had been giving considerable trouble.

"8—This fire caused the loss of several thousand dollars to private filling station and heavy damage to tank truck of the delivering company. Gasoline from the truck on curb was flowing to the tank fill pipe when mechanic of filling station standing near fill pipe lighted a match, the gasoline vapor igniting and causing the damage. The filling hose was immediately drawn from the fill pipe, the gasoline flowing over the concrete floor. Cut off valve on the truck was being held open by a stick and when consumed by fire closed, the gasoline until this continuing to flow, thereby preventing the fire from reaching the interior of tank.

"9—A truck back-fire igniting gasoline. The fire spread throughout the plant and loss was sustained.

"10—This fire occurred several years ago and destroyed an entire square of the business district. A tank truck had started delivering gasoline to a filling station which was inside of a large building. The entrance was a more or less tunnel-like structure in which the fill pipes were located. While the truck was delivering, a strong draft was evidenced in the entrance. This carried the vapor out on the street, where it is thought it became ignited by the smoking of a passerby. The flames travelled back to the open intake and became uncontrollable.

"A few weeks later another fire occurred at a garage under practically the same circumstances, except that the filler cap in this instance was located in the side-walk. While filling the tank a Ford with open cut-out drove by the filler pipe entering the garage and a spout of flame through the cut-out opening set the gasoline tank wagon on fire. Damage, however, was not material."

Bradford Operators Study Their Field by Taking Cores of Sand

By Lawrence E. Smith
N. P. N. STAFF WRITER

BRADFORD, PA., May 22

IT IS common belief among operators in the Bradford district and among technologists who have studied the results of the water drive in this field that the last word on correct practice is yet to be said.

Eminently satisfactory performances, from a profit standpoint, have been had by a number of the producers and this district enjoys a huge advantage over practically every other eastern field. The flooding restores a property to profitable production after it has practically reached the end of its life operating by ordinary pumping methods. Some notable yields have been obtained where the flooding is carried on systematically. One property is said by its owners to have returned about 13,000 barrels per acre since flooding was adopted and the end is not here for that lease. It promises to go to 15,000 to 16,000 barrels per acre.

Yet, with profitable operation the rule where consistent work is done in drilling in advance of the water drive and extending the drive regularly, operators are awake to the necessity for obtaining all the information possible as to the behavior of the water in the sand. The more information they possess, the better will they be able to determine the method calculated to get the highest yield of oil.

No systematic investigation has been conducted or is now under way, although many of the operators realize that much might be accomplished through a research bureau, equipped as to caliber of men and equipment, to make thorough investigation into all phases of oil recovery methods, with special attention to their own method.

There is warrant for the belief that this method will be found applicable to other oil fields of the country. With all possible information as to the characteristics of the Bradford field at hand, it may be determined whether flooding can be practiced elsewhere.

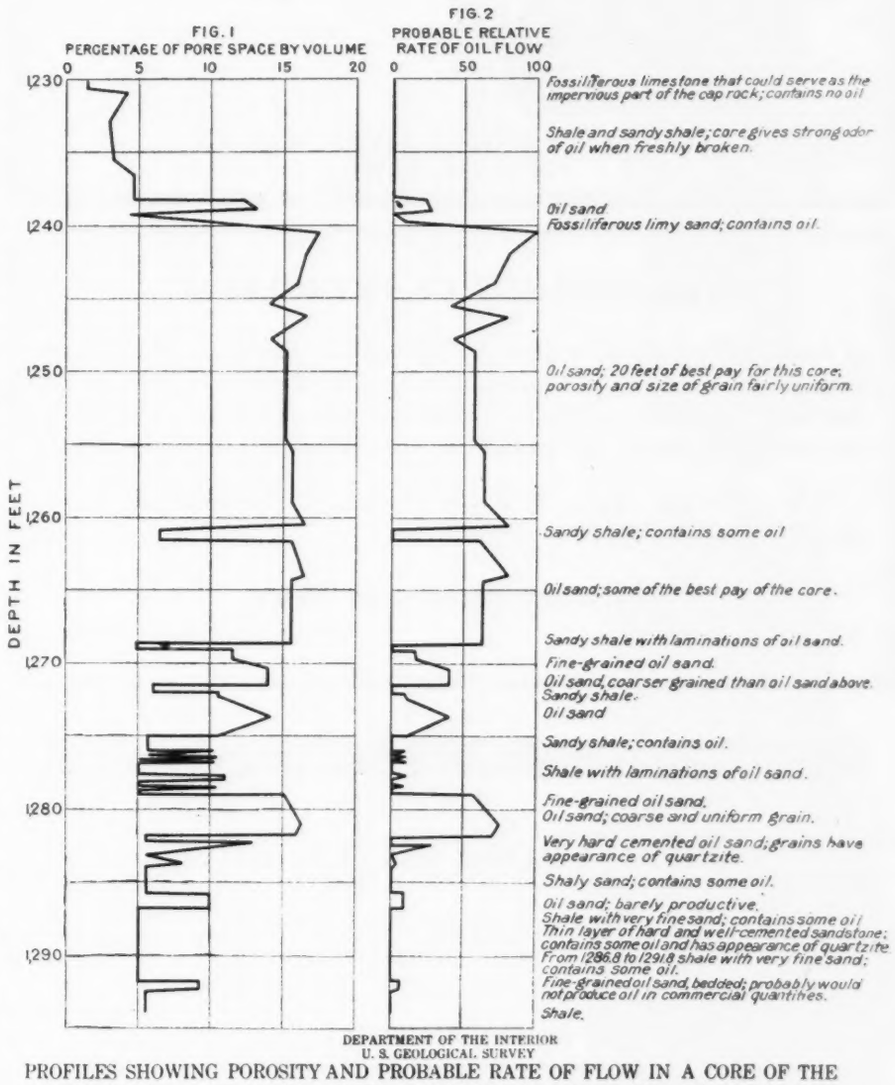
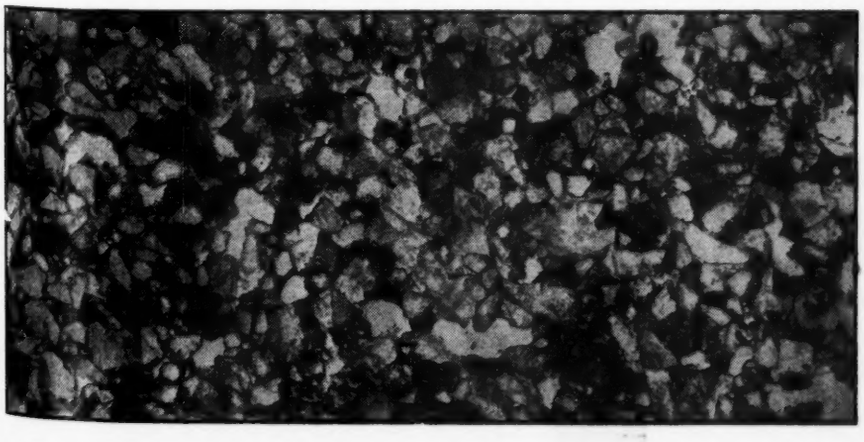


FIG. 1
PERCENTAGE OF PORE SPACE BY VOLUME
0 5 10 15 20
FIG. 2
PROBABLE RELATIVE RATE OF OIL FLOW
0 50 100
DEPTH IN FEET
1230
1240
1250
1260
1270
1280
1290
Fossiliferous limestone that could serve as the impervious part of the cap rock; contains no oil
Shale and sandy shale; core gives strong odor of oil when freshly broken.
Oil sand
Fossiliferous limy sand; contains oil.
Oil sand; 20 feet of best pay for this core; porosity and size of grain fairly uniform.
Sandy shale; contains some oil
Oil sand; some of the best pay of the core.
Sandy shale with laminations of oil sand.
Fine-grained oil sand.
Oil sand, coarser grained than oil sand above.
Sandy shale.
Oil sand
Sandy shale; contains oil.
Shale with laminations of oil sand.
Fine-grained oil sand.
Oil sand; coarse and uniform grain.
Very hard cemented oil sand; grains have appearance of quartzite.
Shaly sand; contains some oil.
Oil sand; barely productive.
Shale with very fine sand; contains some oil
Thin layer of hard and well-cemented sandstone; contains some oil and has appearance of quartzite
From 1286.8 to 1291.8 shale with very fine sand; contains some oil.
Fine-grained oil sand, bedded; probably would not produce oil in commercial quantities.
Shale.
DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

PROFILES SHOWING POROSITY AND PROBABLE RATE OF FLOW IN A CORE OF THE BRADFORD OIL SAND FROM A WELL ABOUT HALF A MILE WEST OF CUSTER CITY, PENNSYLVANIA



Part of photograph of cross section of Bradford sand core taken in flooded area near Richburg, N. Y. Enlargement about 28 diameters. Sand grains are shown as flat irregularly shaped portions and large dark areas are voids between grains. Between several sand grains a film of oil can be seen.

Some Cores Taken

Some rather important work has been done within the past year in the Bradford fields, the results of which have not been given publicity. This work consisted in taking cores of the sand. The data are far from complete and no hard and fast conclusions can be drawn from them, but they are interesting contributions to what knowledge existed on the subject of flooding.

Studies were made of cores taken at points where the water had not penetrated. A. F. Melcher, for a number

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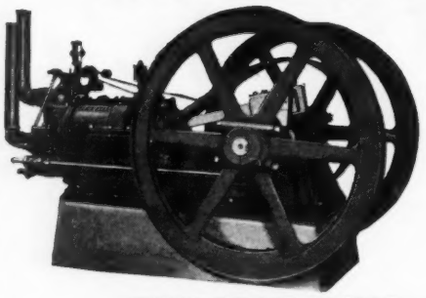

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of years in charge of the porosity research of the U. S. Geological Survey, started the Bradford sand investigation at the request of the Northwestern Pennsylvania Oil Producers Association. He resigned early this year to carry on similar work for the Marland Oil Co. Since his leaving the Survey a press notice has been published on the work he did.

His work on the Bradford sand was chiefly confined to the cores of sand in which there was no water. After these cores were taken, the Forest Oil Co. cored the sand at a point where the flood had penetrated. A full report doubtless will be issued by the Survey later, based on studies now being made. The core was an excellent one and should supply considerable information as to the actual displacement of oil by water, the influence of porosity and some deductions as to the part played by capillarity.

Prior to the completion of the Survey's study of this core of the watered out sand, some information as to the performance of the well from which the core was taken has been obtained from the Forest Oil Co.

The Forest company put into effect a system of flooding about two years ago somewhat different from that which had been employed theretofore. Original publication of the details of this plan was in the Feb. 6, 1924, issue of National Petroleum News. It consists, in brief, of the drilling across the center of a property of a row of wells in all of which the water is put on the sand. On either side of this row of flood wells a row of oil wells is drilled, these being at equal distances from the water wells and from each other and each oil well is outward in a straight line from a point midway between two water wells. The theory upon which this system is based is that waters advancing from two flood wells toward each other push the oil at right angles to the water travel and the oil wells situated as they are catch the oil.

The spot selected for the taking of the core was on the Reed farm, near Richburg, N. Y., and was half way between two water wells and 27 feet off center. The location was made at one side to test the theory that some oil is pocketed —that water sets up an "island" of oil in the sand. The two oil wells, one on either side of the central point between the water wells, were practically "watered out."

Top of Sand Shows Oil

The sand was cored its entire thickness of about 48 feet. Some free oil was found in the top of the core and the well, which had been drilled expressly for the purpose of taking the core, and the operators rigged up the well to pump.

The well has been pumped 24 hours a day with tubing and barrel in the regular position. No attempt has been made to skim the oil from the water, as it was intended as a thorough test on the

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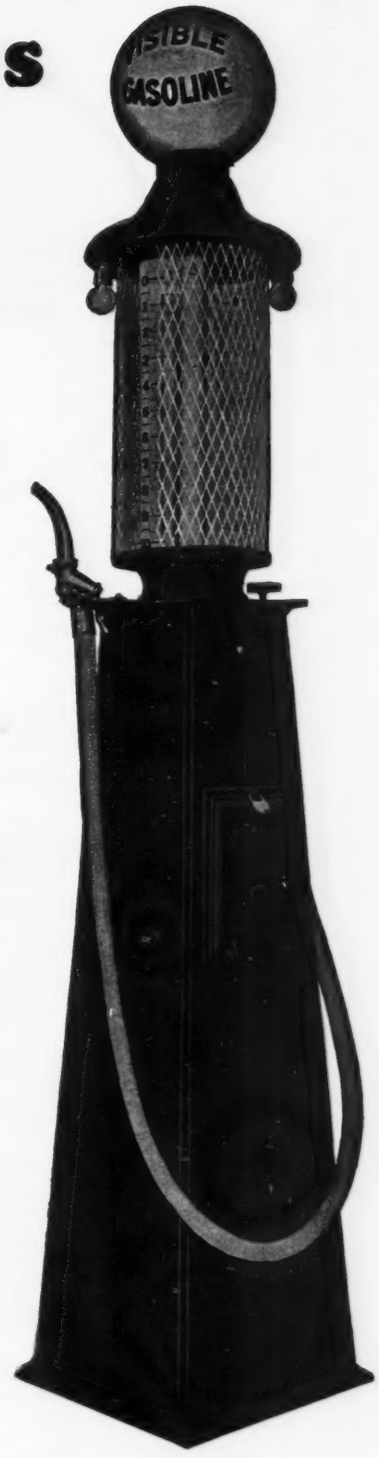

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production by straight pumping methods.

The well has produced something under 300 barrels of oil since it began pumping. The oil is about the usual grade of Bradford crude and separates quickly from the water which is lifted with it. Careful gauges have been taken daily of the water and oil and selections from the record show the following:

Date	Oil Barrels	Water Barrels
Sept. 26	5.25	9.75
Oct. 4	2.63	24.38
Oct. 26	1.5	14.25
Nov. 15	1.375	15.375
Dec. 1	1.031	13.5
Dec. 15	.5625	25.0
Jan. 1	.2813	18.0
Jan. 15	.9375	24.0
Feb. 2	.5625	30.0
Feb. 15	.75	29.0
Mar. 1	.84	29.0
Mar. 16	1.6875	22.0
Apr. 1	.9375	26.0
Apr. 15	1.3125	16.0
May 1	.375	17.25

The foregoing shows well the variation which has attended the test. Some days, not shown in the figures, the well makes no oil at all, then may produce more than a barrel. There seems to be a fairly definite relationship, though not a ratio, between the amount of oil and water lifted. Water production falls as oil production gains, and contrariwise.

It is obvious that at the rate it has produced, the well would never pay out. Some theorizing has been done to the effect that the oil which accumulated in the top of the sand rose to that position from farther down in the sand and that in an area which had been flooded out for several years, it might be found that enough oil had risen to the top to be recovered profitably by skimming, or pumping high to avoid lifting much water. Such theory will doubtless be tested out in time.

Much further work in coring must be done before definite conclusions can be drawn, for the sand cannot be assumed to have the same porosity throughout the entire field and only a detailed study will reveal what could be taken to be an average sand condition.

Mr. Melcher reported on cores which were taken, part of his report being as follows:

Pore Space in Bradford Oil Sand

"Different rocks have different amounts of pore space between their grains. Usually oil occurs in rocks that have a large pore space, and as sandstone generally contains the highest proportion of pore space, the rocks that contain commercial deposits of oil and gas are commonly sandstones.

Depth in feet.	Percentage of pore space by volume
1,230.2	1.4
1,231.0	4.2
1,233.0	2.9
1,235.5	2.2
1,236.5	4.6
1,238.3	12.3
1,238.8	13.1
1,239.3	4.3
1,239.6	9.5
1,240.4	17.3
1,242.0	16.5
1,245.3	14.0
1,246.2	16.5
1,247.7	14.2
1,248.7	15.1
1,254.7	15.1
1,255.3	15.6
1,258.8	15.5

1,260.4	16.3
1,260.8	6.3
1,264.0	16.4
1,264.4	15.5
1,267.8	15.6
1,268.7	4.8
1,269.7	11.5
1,270.3	14.0
1,271.5	6.0
1,273.8	14.1
1,275.0	5.6
1,276.1	10.3
1,279.0	15.1
1,281.0	16.2
1,282.2	13.0
1,283.8	8.1
1,288.3	5.0
1,292.3	9.3

"Figure 1 presents these determinations of porosity in graphic form. Between the depths of 1240 and 1269 feet, the porosity is greatest and most uniform, and it appears likely that this is the most productive portion of the oil sand.

"From the information gathered about oil sands in general, and from preliminary studies of the Bradford oil sand itself, it seems justifiable to assume that the lower limit for production from this sand is not less than 10 per cent. On this assumption, the productive part of the sand in the core from the well near Custer City has a total thickness of only 37 feet, although every foot of the core from 1230 to 1292 feet contained some oil.

"A relation apparently exists between the average porosity of an oil sand and the amount of oil that is recoverable by present methods. The initial production of oil from normal wells near Custer City, Pa., where the sand may be assumed to have an average porosity of 15 per cent, is said to be 10 to 50 barrels, and the average yield by flooding with water is estimated as not more than 4000 barrels to the acre. A sample of the oil sand from the Bolivar district had a porosity of 21.3 per cent, and in the part of this field near the well from which the sample was obtained the initial production is commonly from 200 to 300 barrels, and the yield of oil by flooding with water is said to be 10,000 to 12,000 barrels to the acre.

"The production of wells with identical sand porosities would not be the same in the Burbank and Bradford fields, but the proportion between the yields of sands of say 12 and 15 per cent porosity would probably be similar in the two fields. For example, in the Burbank field a sand with a porosity of 17.3 per cent yields oil about 2½ times as rapidly as a sand with a porosity of 14 per cent, and the ratio between the rate of flow of two oil sands of the same porosities in the Bradford field would probably be about the same. By converting these proportions into a scale of arbitrary units, it is possible to construct a curve showing the probable relative rates of flow in the different parts of the sand in the well half a mile west of Custer City.

This curve (fig. 2) indicates that little if any oil can be recovered by present methods from the parts of the sand that have a porosity of less than 10 per cent and that the 29 feet of sand between 1240 and 1269 feet in this well is the portion that is likely to yield nearly all the oil by flooding with water.

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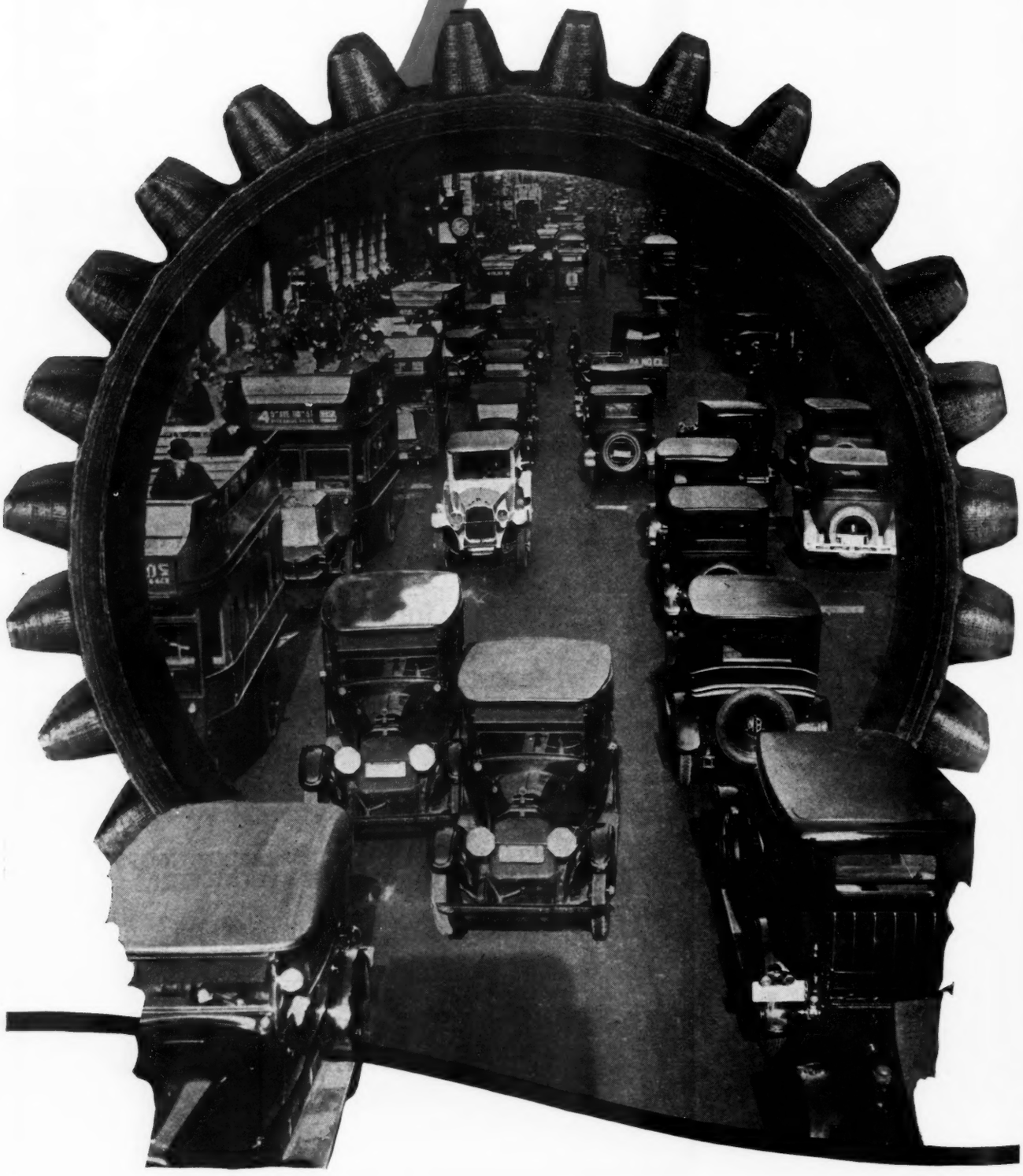

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Novel Features Included in Rainbow Bend Gasoline Plant Just Built

By J. C. Chatfield

N. P. N. STAFF WRITER

TULSA, May 21.

IN THE Rainbow Bend field, Cowley county, Kansas, the Waite Phillips Co. has recently completed an absorption gasoline plant which embraces a number of features which are new in gasoline plants in the Mid-Continent field. Marland Refining Co. is a half owner in the plant but as in the case of the field itself, the Waite Phillips Co. is the operator.

One striking feature of the plant is the appearance of compactness which results from the use of special distillation and heat exchange equipment manufactured by C. F. Braun & Co. The arrangement of this is such that one stillman is able to keep complete control of the process of gasoline recovery from engine room to run-down tank.

An accompanying photograph, Fig. 1, shows the interior of the control house which is located between the stills, condensers, heat exchangers and the absorbers. On the instrument board at the end of the control house are recording devices registering pressures and temperatures throughout the system. The look-box is mounted on the board so that the stream may be observed.

Make tanks are located at both ends of the control house with heads entering through the walls. Gauge glasses for all tanks are completely in view from any part of the control house. Rich oil, lean oil and gasoline pumps are in the control house as are valves for changing the course of the gasoline or mineral seal oil streams.

A few steps north of the control house is the distillation equipment. The operator may step from the control house to change any valve or make any adjustment in a very few seconds after observing the desirability of the change in the control house.

Rich oil from the four absorbers is pumped through a series of heat exchangers counter current to the denuded oil from the still and in a preheater is raised to a temperature of 330 F.

From the preheater the stream is conducted to the top of a vertical counter current steam still measuring 4 by 20 feet where the gasoline content is vaporized and 98 per cent of the mineral seal oil is trapped back to the heat exchangers for raising the temperature of incoming rich oil. The steam still is baffled with California redwood as are the absorbers.

Mixed steam and gasoline vapors are carried over from the still to a dephlegmating tower of similar dimensions which is equipped with two cooling elements where any remaining fractions of mineral seal oil are knocked back. Two lines of two-inch capacity are used to draw off condensed steam and mineral seal oil from the bottom of this tower.

Inter-Cooler Coils

Between the still and tower is the first inter-cooler from which a stream of cool mineral seal oil may be charged into the first cooling element in the dephlegmator to provide for a greater knock back. A second inter-cooler is at the right of the tower as illustrated in the accompanying photograph, Fig. 2, to provide a cool oil stream for the second element in the tower. By-pass lines are provided so that the stream may be conducted in series through the after-coolers without going through the tower.

Gasoline vapors completely denuded of mineral seal oil in the tower are conducted to condensers and thence to an accumulator tank before being withdrawn to storage.

Lean oil enters the after-coolers at approximately 150 degrees F. and is reduced to an average of 70 to 75 degrees F. before being re-cycled through the absorbers.

The plant has four absorbers 20 inches in diameter by 60 feet in height which were likewise manufactured by Braun. Each absorber is equipped with two distributor sections, one at the top and one in the middle. The absorbers are operated in parallel, the mineral seal oil being split into four streams.

Water Problem at Plant

R. R. Dean, general superintendent of the gasoline department for the Waite Phillips Co., was confronted with a problem in providing cooling water for engines as well as boiler water when the plant was being planned. Water from the Arkansas river near by was not fit for use and a deep well was dug. The water from this well, however, was heavily laden with scale forming compounds.

Earlier experience of the company with drilling wells showed that oil field boilers would last only 60 to 90 days before being burned out on account of scale deposits. Rather than wage a continuous battle, a Braun evaporator was installed and chemically pure water is thus provided for boilers and mechanical equipment.

An interesting feature of the plant is that exhaust steam from all circulating pumps is condensed and the water used for recirculation. Undistilled well water is used in the Braun coolers and con-

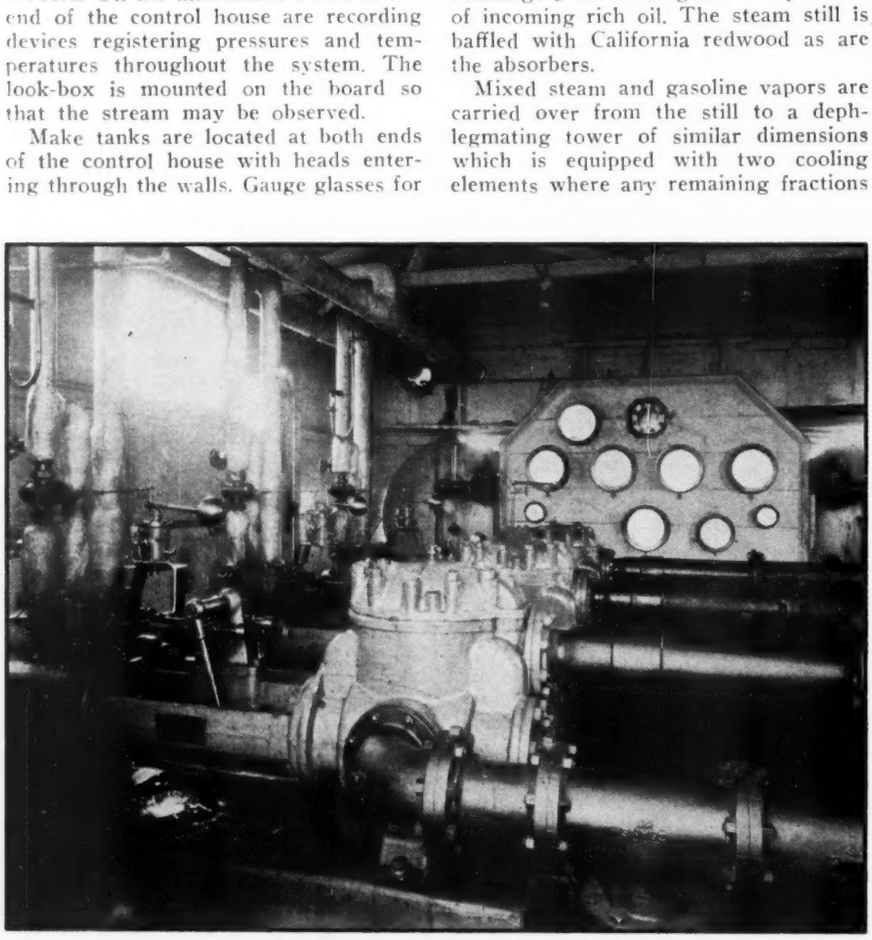

Fig. 1—Interior of the control house at Waite Phillips Co.'s gasoline plant, Rainbow Bend field, Kansas

densers in the gasoline distillation system.

At the recent annual convention of the Association of Natural Gasoline Manufacturers a great deal of discussion centered about the water problem which confronts operators in almost every section in the Mid-Continent. At that time R. M. Coyle of the Chestnut & Smith Corp. stated that while the closed system is much more expensive in point of installation, that it has proven very satisfactory in operation in his experience.

Mr. Coyle reported that a salesman for a certain boiler compound recently visited the plant. The salesman was told that engines in the plant had been operated continuously for 18 months without having had their heads removed and Mr. Coyle announced himself willing to bet a hat that no scale would be found. He won the bet.

Of course, the Waite Phillips plant at Rainbow Bend has been in operation only a little over two months but Mr. Dean is hoping that some time next summer he may have a similar opportunity to win a hat on the lack of scale in his engine heads.

The boiler house is located 300 feet from the remainder of the plant as a safety measure. Steam is generated by four 75-horse power oil field type boilers.

Engine Room

The engine room occupies a site 40 by 200 and contains five direct driven twin unit Cooper compressors which boost gas from the field to a pressure of 35 pounds per square inch. An 110 horse power Miller gas engine in the same room operates two six-inch and one three-inch centrifugal pumps which are used to circulate water for the cooling system.

Gasoline produced at the plant is treated with chloride of lime before being pumped through a two-inch line to the loading rack at Adamsville on the Midland Valley railroad. The treatment causes the gasoline to pass both the doctor and corrosion tests without the use of caustic.

Although Rainbow Bend crude is of high gravity, averaging around 38.5 degrees Be., the initial boiling point of the crude is around 116 degrees F. Flush gas from new wells has a rather high gasoline content but this drops quickly as the wells become older. At the present time the plant is running about 11,000,000 cubic feet of gas per day from which it is obtaining a net production of around 17,000 gallons of Grade Double A gasoline.

It is planned at the present time to add one more unit, a rectifying column and other equipment. Mr. Dean expects to have the plant producing from 25,000 to 30,000 gallons of gasoline by July.

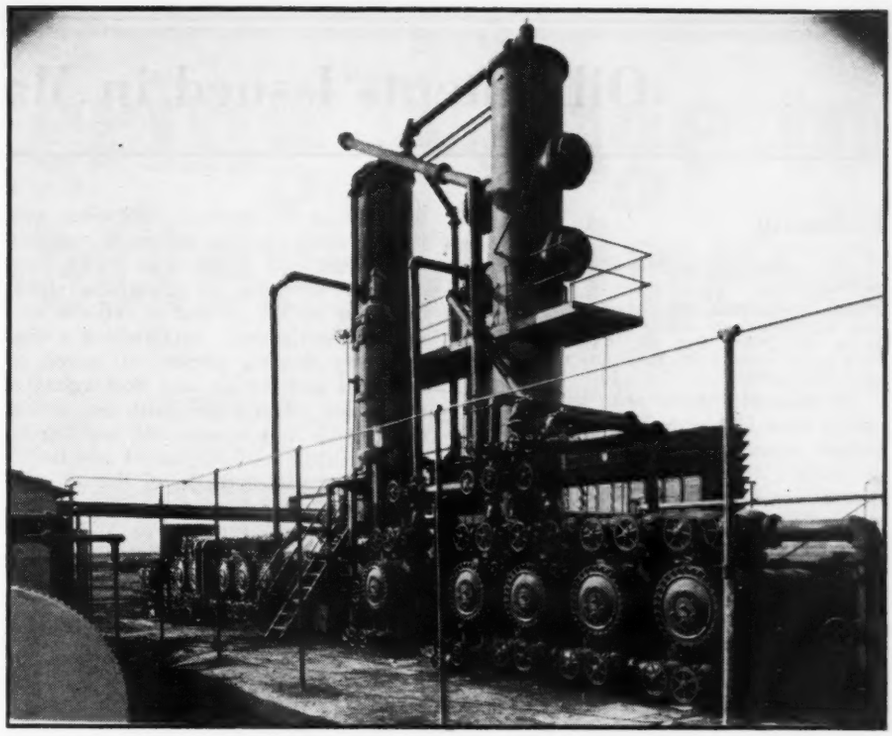

Fig. 2—Towers and intercoolers at Waite Phillips plant

TULSA.—Jack Hammond, of the Banner Machine Tool & Supply Co., St. Louis, has been calling on the trade in Tulsa the past week. He formerly lived in Tulsa and was with the Roxana Petroleum Corp., going to St. Louis when that company moved its general offices there some years ago.

Fig. 3—General view of Waite Phillips Rainbow Bend plant

Oil Patents Issued in March-April

Refining

Another Dubbs Patent

No. 1,534,927, April 1, 1925, Carbon P. Dubbs, Wilmette, Ill. Method for treating hydrocarbon oils. Class 196, Subclass 48. Filed Oct. 20, 1922. Assigned to The Universal Oil Products Co., Chicago. 15 claims.

To efficiently decompose hydrocarbon oils to form lighter boiling fractions, this process consists in subjecting a stream of oil in a tube to a cracking temperature under a pressure exceeding atmospheric, in discharging the oil into an enlarged zone, in stepping down the pressure on the oil in said zone to a pressure substantially lower than the pressure maintained on the oil stream but above atmospheric, in subjecting generated vapors to reflux condensation, in returning reflux condensate to said enlarged zone, in introducing under an applied pressure reflux condensate and light unvaporized oil from the enlarged zone to said tube to pass in a stream therethrough, in withdrawing during the operation of the system heavy carbon containing residuum from the enlarged zone, and in supplying charging stock to the system during operation

For Decolorizing Oil

No. 1,534,376. April 21, 1925, Henry Guy Fowler, Associated, Calif. Processing hydrocarbon lubricating oils. Class 196, Sub-class 41. Filed Oct. 16, 1923, (Assigned to Associated Oil Co., San Francisco. Four claims.)

To save time in the refining of lubricating oils, this process comprises initially treating the oil with sulphuric acid; then treating said acid-treated oil with alkali; then rapidly settling out from the alkali-treated oil approximately all the alkali solely by quickly heating the oil; then treating the oil with a decolorizing agent; and finally separating said decolorizing agent from the oil.

Cracking With Light Gas

No. 1,533,839. April 14, 1925, Rector Egeland, Chicago. Process and apparatus for cracking hydrocarbons. Class 196, Subclass 62. Filed Oct. 17, 1921. Six claims.

To efficiently decompose crude oil the process includes circulating hydrocarbons, supplying a gas such as methane to said hydrocarbons during circulation, subjecting the hydrocarbons and gas to heat, passing the vaporized and unvaporized hydrocarbons resulting from the application of heat to said hydrocarbons and gas to a still and supplying additional gas and hydrocarbons through an ejector to the unvaporized hydrocarbons and again subjecting the unvaporized hydrocarbons, added gas and added hydrocarbons to heat.

Continuous Acid Treating

No. 1,533,325. April 14, 1925, Harold T. Maitland, Sharon Hill, Pa. Process of refining mineral oil. Class 196, sub-class 45. Filed Dec. 4, 1920. Assigned to Sun Oil Co., Philadelphia. Two claims.

To reduce the time during which lubricating stock is subjected to the action of an acid the process comprises subjecting stock that is devoid of substantial quantities of oxidized or polymerized products and that is substantially free of water to the action of sulfuric acid without settlement, establishing a continuously flowing stream of mixed oil and acid and during said flow agitating the mixed oil and acid with air, and at the end of said stream and without allowing substantial settlement and before substantial discoloration of the oil, continuously separating the oil and acid sludge by centrifugal force and separately continuously outflowing the oil and acid sludge

Decolorizing With Wet Clay

No. 1,533,060. April 7, 1925, Irwin Arthur Clark, Parco, Wyo. Method of treating oils with prepared clays. Class 196, sub-class 147. Filed Nov. 11, 1924. Assigned to Producers & Refiners Corp. Three claims.

To increase the decolorizing properties of clays for bleaching petroleum, animal and vegetable oils, this process comprises mixing a filtering material with the amount of water that will form a mudded mass, without the use of acid of any kind, and intermixing the said mass with the oil to be treated

Van Tilburg Fractionating Apparatus

No. 1,532,456. April 7, 1925, Frank E. Van Tilburg, Minneapolis. Apparatus for separating composite oils into component parts. Class 196, sub-class 106. Filed June 14, 1923. Five claims.

To efficiently separate lighter petroleum products from the heavier petroleum products of crude oil, this apparatus includes a plurality of main stills, dephlegmators connected with said stills, a pan in each of said dephlegmators for collecting condensate formed therein, pipes connecting said pans in series, an auxiliary still, a pipe connecting the last one of said pans with said auxiliary still for conducting the condensate thereinto, means for conducting vapors from one of said main stills into said auxiliary still for redistilling the condensate therein by heat of said vapors and means in said auxiliary still for preventing said vapors from coming into contact with said condensate.

Cracking With Steam

No. 1,530,587. March 24, 1925, Henry Clay Wade, New York. Method of treating hydrocarbon oils. Filed July 15, 1921. Two claims.

To mechanically assist in the decomposition of crude oils without the formation of carbon, this method comprises subjecting water to a temperature exceeding 212° F. within a closed container while the water is confined to prevent its free vaporization, and thence leading the superheated water into a chamber where it is permitted to vaporize by sudden and explosive action, flowing the hydrocarbon oil into said chamber with the inflowing superheated water, so that the hydrocarbon liquid is subject to the explosive action created by the said sudden free expansion of the water into steam, and thence leading the vapors through a cracking coil, the water and oil being introduced into the cracking coil at the same point.

A Tube Still Design

No. 1,529,030. March 10, 1925, Robert H. Lindsay, Houston. Still. Filed Dec. 16, 1921. One claim.

To provide a still construction especially adapted for the treatment of crude petroleum, this improvement comprises a furnace, a tank above the furnace, a pipe leading from the bottom of the tank, and formed into zig-zag turns lying in a vertical plane, within the furnace and terminating in a discharge outlet, an outlet line arranged above the furnace, a pneumatic pressure line beneath the turns of said pipe, upstanding nozzles connected into the pressure line, said nozzles extending into the lower ends of alternative turns of said pipe, and disposed to discharge pressure fluid into said turns with the current of fluid flowing through said pipe, said turns being restricted above the respective nozzles, tubes connecting the turns, which said nozzles enter, into said outlet line.

New Still Design

No. 1,528,520. March 3, 1925, William D. P. Aims, Philadelphia. Petroleum still. Filed Sept. 30, 1920. Five claims.

To provide an internally heated still for distillation in several stages constructed to facilitate inspection, temperature regulation, and replacements, this invention comprises a heat retaining casing or cabinet having top and bottom outlets for the distillate and residuum respectively, a series of superposed internally heated heaters and slit-bottom troughs alternated with the heaters and arranged in the casing or cabinet and spaced from the side walls thereof, valves operatable from the exterior of the casing and appertaining to the respective heaters for regulating the heat of the heaters independently, and means for introducing the material to be distilled onto the top heater, substantially as described.

To Clean Wax From Presses

No. 1,528,427. March 3, 1925, Edgar M. Clark, New York, N. Y. and Frank A. Howard, Elizabeth, N. J. Art of filtration. Filed Dec. 22, 1920. Assigned to Standard Development Co. Six claims.

To remove wax from a filter press filled with wax this process comprises forcing heated slack wax into the press, thereby melting the wax in the press and forcing it out of the latter and simultaneously applying heated slack wax to the exterior of the press.

Aluminum Chloride Treating

No. 1,528,398. March 3, 1925, Benjamin T. Brooks, South Beach, Conn., and Harrison O. Parker, Howard Beach, N. Y. Refining of cracked gasoline. Filed Dec. 18, 1922. Assigned to The Mathieson Alkali Co.

(Continued on page 102)

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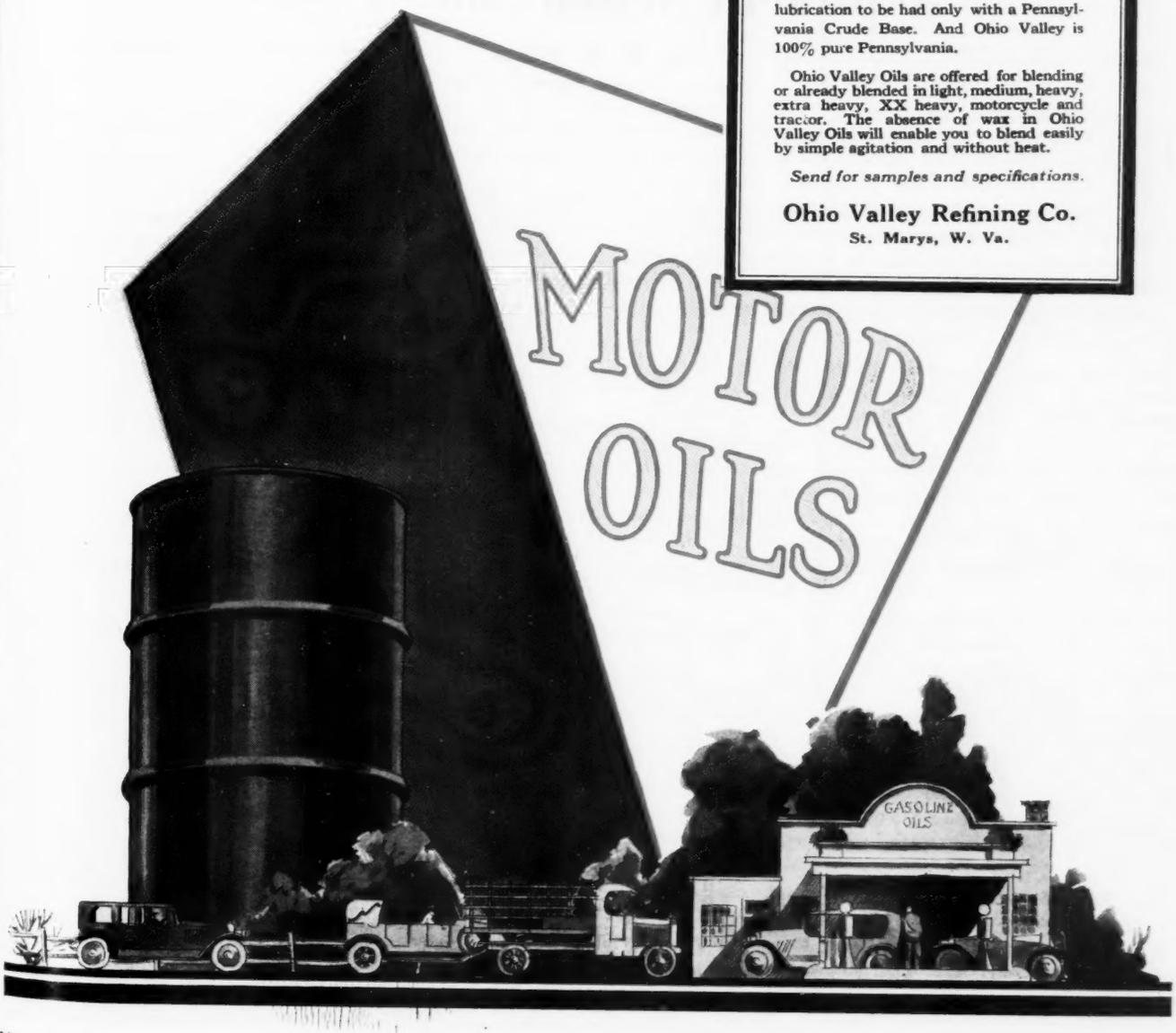

(Continued from page 100)

Spraying Oil Into Steam

No. 1,528,327. March 3, 1925, John Hancock, Webster Groves; O.; Myrtle C. Hancock administratix of said John Hancock, deceased. Process and apparatus for refining petroleum oil and its distillates. Filed Nov. 10, 1919. Six claims.

Miscellaneous

Treating Benzol Waste

No. 1,534,554. April 21, 1925, Fred W. Wagner, Pittsburgh. Method of treating waste of benzol recovery. Class 196, Sub-class 76. Filed April 25, 1923. Assigned to Jones & Laughlin Steel Corp., Pittsburgh. Four claims.

To Prevent Harbor Pollution

No. 1,530,087. March 17, 1925, William J. MacArthur, Los Angeles. Oil and water separator. Filed Dec. 17, 1923. One-half interest assigned to Rea E. Maynard, Los Angeles. Eight claims.

Grease Making Method

No. 1,530,386. March 17, 1925, James McKee, Chester, Pa., and Samuel B. Eckert, Devon, Pa. Process of making grease. Filed July 29, 1921. Assigned to Sun Oil Co., Philadelphia. 10 claims.

Linseed Oil Substitute

No. 1,528,884. March 10, 1925, Harold T. Maitland, Sharon Hill, Pa. Process of manufacturing a new composition from mineral oil. Filed March 24, 1923. Assigned to Sun Oil Co., Philadelphia. Four claims.

Coal Tar Distillation

No. 1,528,313. March 3, 1925, Anton Weindel, Essen-Ruhr, Germany. Process for disintegrating or decomposing coal tar or its distillates into phenols and neutral oils. Filed May 15, 1924. Assigned to Zeche Mathias Stinnes, Essen-Ruhr, Germany. Five claims.

Carbon Black By Catalysis

No. 1,528,099. March 3, 1925, Charles F. Crommett, Chelsea, Mass., Method of decomposing hydrocarbons. Filed May 24, 1922. One-third interest assigned to Wilford J. Hawkins, New York, and one-third interest to Louis N. Wheelock, Boston. Three claims.

Decomposing With Inert Carrier

No. 1,530,627. March 24, 1925, Carey W. Thompson and Henry C. Beeler, Denver. Process for cracking oil. Filed Sept. 19, 1922. One claim.

Natural Gasoline

To Separate Wild Gases

Re. 16,052; April 21, 1925, Emil Schill, Woodmere, N. Y., and Franz Woidich (known as Francis Sales Woidich), Sapulpa, Okla. Process of and apparatus for extracting, liquefying, and separating liquefiable constituents of gases. Class 196, sub-class 8. Filed May 28, 1924.—Original dated 5-9-22—Original filed 4-9-17. (Assigned to Continental Gas Compressing Corp., of New York. 19 claims.

Production

Chemical Dehydration

No. 1,529,349. March 10, 1925, William O. Eddy, Long Beach, Cal. Process for treatment of oil emulsions. Filed May 7, 1923. Seven claims.

Pumping Sand Laden Wells

No. 1,530,624. March 24, 1925, Wilson T. Smith, Los Angeles. Method of and apparatus for pumping sand-laden oil wells. Filed April 29, 1924. Three claims.

N. P. N. and Oilgram Market Quotations Represent Actual Sales Prices

By W. C. Platt

EDITOR, NATIONAL PETROLEUM NEWS

THE recent activity in refinery markets has shown that many in the oil industry do not accurately appreciate just what the prices given for petroleum products in the various refinery markets of the country by National Petroleum News and Platt's Oilgram, represent.

1—These prices each week by N. P. N. and daily by The Oilgram, are *not* quotations but the prices at which sales on a sizeable quantity of stuff were actually made on a day named.

2—When the price is given as representing the market, that price is the figure at which the bulk of the sales in that particular market were made.

3—These prices are obtained direct from all those participating in the sales, refiners, re-sale agents, and marketers,—the buyers. A representative number of each of these factors is seen or talked to every day for this information. In many offices confidential books showing all details of the sales and purchases are open to our representatives. If we have any doubts, as we do have occasionally, of the accuracy or good faith of a seller's or buyer's statements to us, we make a special check on him in various ways and very quickly learn just what his real price is. A number of efforts, have been made to "bull" or "bear" our statements of the markets. Some of these efforts have been most skilful. Some have been mighty rough. By reason of our skilled news gatherers talking in person and by telephone to a large number of factors, big and little, in *every market every day*, we have made it practically impossible for any material error to be in our statements of what the markets are.

We say frankly that a shrewd buyer, who is willing to put in the time and labor, can generally buy SOME petroleum products, below the current price which we give. Also a careless buyer, an ignorant one, or one who is not greatly concerned to get the last ⅛ cent, may buy some material at above the prices we quote. All we endeavor to show is the range in which, or the price at which the bulk of the sales are made.

If we were to give the highest price of the day and the lowest price also, that the trade might make an average of the two, that would not be a fair indication of the market, because 800 cars might be sold at 12 cents, 150 cars at 12¼ cents and 50 cars at 11¾ cents. Also our posting the highest and lowest prices would make it possible for a seller to register an excessively high price by a small sale which would be substantially faked, and for a buyer to do the same with a low price. There is bound to be always some effort to manipulate a market. We believe our present way of giving the prices reduces such possible manipulation to a minimum.

The reasons one may be able to buy below our prices are:

1—The smaller and weaker refiners some times become loaded with products to the point where they can't carry them any longer; they must have cash at once, that is within a few days or even a few hours. Naturally they cut the price and sell. As there are several score or more such small refiners over the country there frequently is one or more of them in the market with some cut price stuff. It is, therefore quite often possible to pick up 10 or 20 or so cars a day from these plants. To do that, however, one must be constantly on the job, in daily even hourly touch with a large number of these plants. That is work and it also is expensive. *If every buyer undertook to keep an eye out for these bargains there would be such a demand for them that they would not exist.* Relatively few buyers, the country over, bother with them, yet these few cars are the subject of much conversation. It would be practically impossible for the average jobber to make certain of doing business with them regularly, because an individual jobber is not a steady enough market and he is too far away. Yet many a jobber talks much about the reports of these cut price offers—"distress" offers—and sometimes becomes dissatisfied with the regular source of supply that takes care of him rain or

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Lubricating Oil

We can furnish you with oils for all lubricating purposes—quality goods at fair prices.

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We Sell To
OIL JOBBERS ONLY

OFFICIAL BOTTLE OF THE PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION Permit No. 49

100% PURE PENNSYLVANIA OIL

The highest grade oil in the world

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shine but which source obviously cannot do business all the time on a cut price or losing basis.

2—Seeming bargain offers come also by reason of the product being below test, perhaps not enough to make any difference in its use, but enough that a jobber would object to taking it at the regular refinery price. One is surprised and disappointed at the rumpus a buyer will kick up over a few degrees more or less in a test, but when the buyer has been given a slight allowance then the product seems to become all right so far as selling it to his regular consuming trade at the regular price is concerned. Some bargains from refiners are only slightly off test and again some are way off test, but in the trade's discussion of their price, little or nothing is said about this defect.

3—Bargain offers also come from re-sale agents who have bought ahead from the refiner in anticipation of a continued advance in the market and who come to the time in the month when they must order out the stuff. Then they do the easiest thing to move it and that thing is to shade the price.

4—Bargain prices don't always come from the smaller and weaker refiners. Large and well financed companies, generally equipped with their own bulk stations, in working out their manufacturing and storage programs may miscalculate and find themselves with a quantity of a product on hand more than they deem wise, or they may have an idea that a crude price cut is coming. These refiners will sometimes over night offer products of which they desire to cut down the stocks, at a price slightly under the market, so as to move them quickly. For the day or two these sales efforts are being made the market as a whole may be adversely effected but it generally recovers when the special offers have been withdrawn. These offers are usually put forth in a manner that will cause the least general market disturbance. However, they are usually much advertised afterwards in discussions in the trade. Some buyers are prone to overlook the fact that they can buy only a specific and very limited amount of this bargain stuff, only a drop in the bucket to even the buyer's requirements. If the rest of the sellers do not follow down to these special offers, the latter obviously are not the market.

Another cause of confusion in the minds of both buyers and sellers is the failure, or the inability, to identify the source of the stuff offered at special prices. All N. P. N. and The Oilgram can do is to state what WAS the price in EACH selling market at a particular time. Neither ourselves nor any one else can say what the market price for gasoline is over the whole country when there isn't any such price.

The refiners in Group 3, Oklahoma, having the largest output naturally are the most important factors in the market. The trade generally recognizes that and many contracts for gasoline, for illustration, regardless of its source, are based on Group 3 prices.

While Group 3 is an important selling point, nevertheless there are other selling points which may not always work closely in accord with Group 3, such as Kansas, north Texas, Louisiana, Arkansas and Illinois, for illustration. In the last few weeks Group 3 prices have been stronger than prices from many of these other territories. Yet the trade has not always recognized that fact. No one can state a single price for all of these districts because there isn't any such price. One can only state a price for each district.

In some of these districts the amount of refinery products moving on the open market, is sometimes extremely small and hence the price is subject to greater fluctuation than where a bigger quantity is on the market. A buyer with a contract based on Group 3 price, but which contract is being filled or may be filled from another district should bear in mind that Group 3 is only one district and while it may be the dominating district and while it may be good business for a buyer to base the price of any contract regardless of the source of the purchase on Group 3, nevertheless he should be willing to recognize that there may be times when other districts might be below Group 3 or above it even.

Still another cause of some confusion is failure to appreciate that at times there is a local market in Chicago different from any Mid-Continent market, yet Mid-Continent products are sold currently therein. This Chicago market is that of the re-sale agents. As has been pointed out some times these agents have bought ahead and dumped their stuff at less than the Group 3 price, other times a refiner may let the re-sale agents put out a few cars at a cut price from Chicago rather than dump those cars directly on the refiner's market at Tulsa. Of course, he can't put out any quantity in this way without disturbing the open Tulsa market.

Again on a falling market re-sale agents will some times sell short—that is sell the jobber cars which the re-sale agent has not yet purchased. The re-sale agent will then wait as close to shipping time as possible before buying, waiting for the last drop in the market. Sometimes the re-sale agent guesses wrong as to what the market will do and will be unable to fill the order except at a loss.

As a rule the first weakness in the sales prices to jobbers is apparent in the Chicago re-sale market. The open refinery market at Tulsa is the last to be affected. However, the first strength of a rising market becomes apparent in Tulsa before it shows up at Chicago. Resale agents at Chicago may be selling below an advancing refinery market for a month or more before they finally come up to the Tulsa market. This is due to the re-sale agent having bought ahead while the refiner discounted the possibility of an advance.

In a boom market with the boom going full blast, the Chicago selling market is liable to be ahead of the Tulsa market, while on an extremely weak market, Chicago may be under the Tulsa market.

And a last point—the refinery prices given by N. P. N. and The Oilgram are FOR THE DAY NAMED in the report, not for the day they may be received by the subscriber. This organization is not in the business of clairvoyancy or fortune telling. We do not undertake to say what the market will be tomorrow, only what the market was *in the past*. Frequently we find oil men who think the price in the Oilgram on the morning that they receive the Oilgram is the price for that business day. It is not. It is *yesterday's* price. Today's price remains to be made. Occasionally on a rapidly changing market there will be a difference between the price of 3 o'clock one day and 10 o'clock the next morning. The price is usually fixed in trading by 1 to 2 o'clock in the afternoon and rarely changes in that day after that hour. However, when the market opens the next morning there may be considerable change almost at the opening, depending often on how sharply the banker spoke to the refiner on the telephone when the memorandum of the day's notes due was placed on the banker's desk at 9 that morning.

N. P. N. and The Oilgram only undertake to state facts as to what has transpired in oil prices of a given time. Every effort is made and much expense is incurred to make certain of those facts.

That an ever widening circle of oil company subscribers is spending an increasing number of millions of dollars for petroleum products on prices given in The Oilgram and N. P. N., is a flattering attest of the promptness, thoroughness and accuracy of the service.

Committee Recommends Present Tension Testing Method With Changes

CLEVELAND, May 21.—The special technical committee of the American Petroleum Institute that some months ago was charged with the task of conducting comparative tests of the present or Dunn method, and the proposed Anderson method for testing vapor tension of natural gasoline for shipment in tank cars, has ended its efforts and recommended the present vapor tension method, as modified by the committee, for permanent adoption.

This was at a meeting of the committee held last month in the William Penn hotel in Pittsburgh. Discussion at the meeting brought out the belief concurred in by a large majority of the committee that the actual vapor tension of the gasoline, within reasonable limits, is a negligible source of hazard as compared with the use of screw type dome covers. It was brought out that by far the greater proportion of the accidents that have occurred in the shipment of gasoline have occurred in the unloading, not in the loading, and that the accidents almost invariably have resulted from unscrewing the dome cover while there was pressure in the car or from some improper handling of the dome cover removal, and would have happened even had the vapor tension of the product in the car been below the required limit.

Therefore the American Railway Association was urged to abolish the screw cover and substitute some cover that it would be impossible to remove until the pressure in the car had been relieved. The committee summed up its action as follows:

"It is the report of the special technical committee of the American Petroleum Institute that it is useless to continue comparative tests on vapor tension methods for the following reasons:

"a. It has been determined that the two methods under consideration are not in any measure comparable; and

"b. The present modified standard method is possible of duplication and is practical in operation; and

"c. The present modified standard method more nearly simulates the actual tank car conditions than the Anderson method.

"Therefore, the present standard method as modified by the committee is recommended for permanent adoption."

Following is the proposed modification of the present standard apparatus for determining vapor pressure and the method of its operation.

Description of Apparatus

"The bomb shall be constructed of standard 2" lap-welded steel pipe with welded heads of 3/16" steel plate, the overall length to be 11½". The upper head shall be dished outward ⅛", and into its center shall be welded a piece of ¼" pipe 1" long with projecting end threaded and carrying a ¼" pipe collar. The ¼" pipe shall not project into the interior of the bomb beyond the inner surface of the plate to which it is welded. The bomb shall be tested and made tight at 100 lbs. hydrostatic pressure.

"To the bomb shall be chained a piece of ¾" pipe, closed at the bottom, just long enough to hold 10 per cent of the bomb capacity. A small base is to be welded to the bottom of the pipe for stability, and the chain connecting the ¾" pipe to the bomb is to be long enough to permit of pouring from the bomb to the ¾" pipe cup.

"The pressure gage shall be 4½" in diameter, with threaded ring and plate glass front, and the dial shall be calibrated from 1 to 45 lbs. per sq. inch in 1 lb. divisions. The bottom connection shall be ¼" for screwing in collar of bomb and shall be provided with a suitable hexagon nut to provide a wrench grip in attaching and removing the gage.

"The capacity of the bomb in cubic centimeters, when filled to the top of the ¼" collar, shall be determined, and the figures punched on the outside near the top.

"A small loop shall be welded near the top of the bomb for attaching a wire or rope to use in filling.

"The venting case (see under venting operation) shall be a double-walled cylindrical container with the inside cylinder 11½" in height, open at the top and closed at the bottom, and large enough in diameter to permit of the easy insertion of the bomb during the venting operation The outside cylinder shall be 1" larger in diameter and ½" longer than the inside cylinder, thus providing an annular space ½" in thickness between the cylindrical walls, and ½" between the bottoms of the two cylinders. The space between the two cylinders shall be filled with hair felt and a ring provided to close the opening into the annular space at the top. This case shall be constructed of 24 gage galvanized iron and all joints soldered.

Method of Operation

"1. **Filling the Bomb.** The bomb shall be completely filled with the gasoline to be tested in such fashion as to avoid weathering. This shall be done as follows: Immerse bomb in main body of gasoline in tank or tank-car for five minutes, remove and empty bomb, then immerse again for filling with the sample to be tested. The samples from tank cars shall be taken from approximately the center of the car.

"At the time that the sample of gasoline is taken, the temperature of the gasoline shall also be taken at the same

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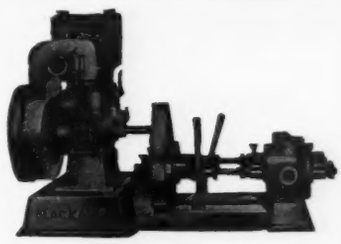
Also Manufacturers of Transmission Towers — Radio Towers

BLACKMER ROTARY PUMPS



More Gallons Per Dollar

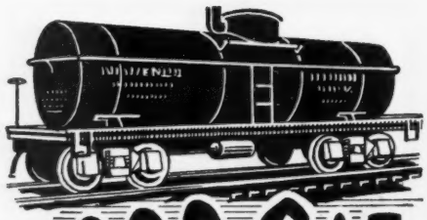
The efficiency record for Blackmer Rotary Pumps is—less than one cent per thousand gallons.

We do not claim that every Blackmer will equal this record but we know that Blackmer Rotary Pumps will give dependable service through a long period of years at a minimum operating and maintenance cost. The first Blackmer unit, built over twenty years ago, is still delivering its rated gallonage.

The principle of automatic take-up-for-wear, found in all Blackmers, makes this long life possible.

Let our engineers help you to solve your pumping problems

Blackmer Rotary Pump Co.
PETOSKEY, MICHIGAN
Offices in nineteen principal cities



8000 GAL. Car Unloaded in Less Than 2½ hrs.

Just the pump you want for your unloading station. Simple in construction, easy to install and easy to operate.

Only 2-Pump Outfit on a Single Base

Two pumps are permanently mounted on a single one-piece cast iron base, with power jack attached. One power equipment for pumping two kinds of fuel. Will operate without vibration on any kind of a foundation.

Cast iron base under pumps forms oil pan which is tapped for drain pipe, insuring a safer and cleaner pump house.

Plunger, slow speed, and packed with special cup leathers. A special safety feature, since with any pump some air is pumped with gasoline when tank is almost empty.

Either pump may be connected to the cross-head by two machine bolts and operated separately or together.

Write for Special Oil Pump and Oil Supplies Catalogs.

Dempster Mill Mfg. Co.

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726 S. Sixth St., Beatrice, Nebr.

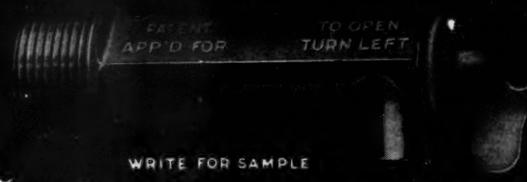
Branches: Oklahoma City, Okla.; Denver, Colo. Kansas City, Mo. Omaha, Nebr. Sioux Falls, S. D. Amarillo, Texas

Distributors: Sharpsville Boiler Works Co. Sharpsville, Pa.

Builders of satisfactory pumps and pumping equipment for over 40 years.

DEMPSTER OIL PUMPS

"KWIK-FLO"



WRITE FOR SAMPLE

One half turn opens or closes!

CLIPPER TOOL CO. INC.

400 MILLS ST. BUFFALO, N.Y.

SATISFIED CUSTOMERS

Build a Healthy Repeat Business

Globe Oils plus Globe Oil & Refining Co. service, have built highly satisfactory businesses for many jobbers.

A record of conscientious refining, combined with up-to-date business methods have enabled us to grow and maintain the confidence of more and more business men each year.

It will pay you to write for samples of our products and details of our service.

The Globe Oil & Refining Co.

Manufacturers Petroleum Products

Refinery: Blackwell, Oklahoma

Sales Office: Atlas Life Bldg., Tulsa, Oklahoma

level in the tank or tank-car by the use of a bath or cup thermometer accurate to 1° F.

"Remove the bomb from the gasoline and immediately pour out only enough gasoline to fill the attached ¼" pipe cup, and immediately screw the pressure gage tightly into the collar, using liquid shellac or other suitable pipe joint cement on the threads.

2. **Heating to 70° F. and venting.** Immerse the bomb in water at 70° F. up to the bottom of the hexagon nut on the pressure gage and allow to remain for five minutes. Stir the water continuously with the bomb, keeping the temperature at 70° F. for this interval. Make sure that there are no leaks from bomb, or connections. Read the pressure indicated by the gage after tapping lightly.

"Then remove the bomb from the water and insert at once into the protecting venting case. Unscrew the gage slowly until escape of gas from the bomb is noted, and continue this operation little by little, until the hand on the gage drops to the pin, taking care that no loss of gasoline occurs. Remove gage from bomb, leaving collar open at end for a period of twenty seconds, and then screw gage tightly into collar again.

"3. **Heating to 100° F.** Remove bomb from venting case and immerse it in water at 100° F. (90° F. from Nov. 1 to March 1) up to the bottom of the hexagon nut on the pressure gage. Stir as before and maintain the water at the proper temperature. Make sure that the bomb or connections do not leak. At the end of ten minutes tap the gage lightly and read the pressure.

"If the initial temperature of the gasoline is lower than 60° F., a deduction shall be made from the observed pressure just obtained, equal to 1/10 lb. for each degree of difference between the observed temperature of the gasoline and 60° F.

"Care should be taken through frequent checking, (at least monthly) to make sure that all pressure gages indicate pressure accurately."

Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

14958.—**Lubricating oils, (various grades), white paraffin oil and pharmaceutical petrolatum,** Cairo, Egypt, purchase and agency.

14961.—**Lubricating oils, cylinder oils, petrolatum and paraffin,** Dresden, Germany, purchase.

14988.—**Motor oils, industrial oils, and greases.** Geneva, Switzerland, purchase or agency.

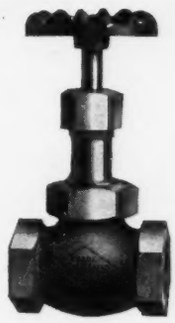


Fig. 750
Screwed Jenkins Bronze "Marine" Globe Valve with regrinding seat and union bonnet.

Fig. 752
Screwed, Jenkins Bronze "Marine" Angle Valve with regrinding seat and union bonnet.

For 225 lbs. steam pressure

This union bonnet bronze globe valve meets the need for an especially high-grade regrinding valve for working steam pressures up to 225 lbs.

Its construction is typically Jenkins. Metal thickness is uniform, disc is held securely against the bevel seat, note the ample packing space and powerful spindle threads.

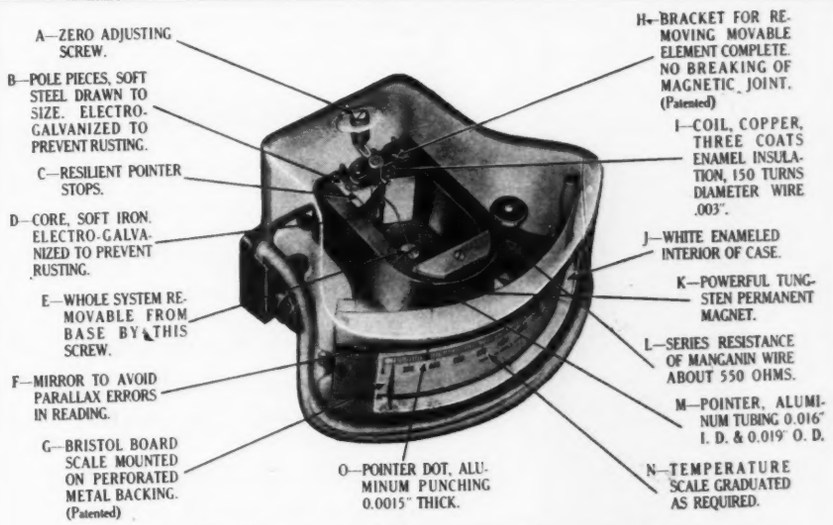
This type of valve was originally introduced for marine service, but it is widely used in other fields, including the oil industry. It has the Jenkins "Diamond" and signature cast on one side of the body, and the word "Marine", together with pressure and size, on the other side. When so ordered, these valves are specially tested for oil.

JENKINS BROS.

80 White Street.....New York, N. Y.
524 Atlantic Avenue.....Boston, Mass.
133 No. Seventh Street.....Philadelphia, Pa.
646 Washington Boulevard.....Chicago, Ill.

JENKINS BROS., Limited
Montreal, Canada *London, England*

Always marked with the "Diamond"
Jenkins Valves
SINCE 1864


A—ZERO ADJUSTING SCREW.
B—POLE PIECES, SOFT STEEL DRAWN TO SIZE. ELECTRO-GALVANIZED TO PREVENT RUSTING.
C—RESILIENT POINTER STOPS.
D—CORE, SOFT IRON. ELECTRO-GALVANIZED TO PREVENT RUSTING.
E—WHOLE SYSTEM REMOVABLE FROM BASE BY THIS SCREW.
F—MIRROR TO AVOID PARALLAX ERRORS IN READING.
G—BRISTOL BOARD SCALE MOUNTED ON PERFORATED METAL BACKING. (Patented)
O—POINTER DOT, ALUMINUM PUNCHING 0.0015" THICK.
H—BRACKET FOR REMOVING MOVABLE ELEMENT COMPLETE. NO BREAKING OF MAGNETIC JOINT. (Patented)
I—COIL, COPPER, THREE COATS ENAMEL INSULATION, 150 TURNS DIAMETER WIRE .003".
J—WHITE ENAMELED INTERIOR OF CASE.
K—POWERFUL TUNGSTEN PERMANENT MAGNET.
L—SERIES RESISTANCE OF MANGANIN WIRE ABOUT 550 OHMS.
M—POINTER, ALUMINUM TUBING 0.016" I. D. & 0.019" O. D.
N—TEMPERATURE SCALE GRADUATED AS REQUIRED.

Look Into A Brown Pyrometer

—and you will find that it is the pyrometer for you. Of the utmost accuracy, absolutely simple to use and wonderfully rugged. Then add to these qualities:

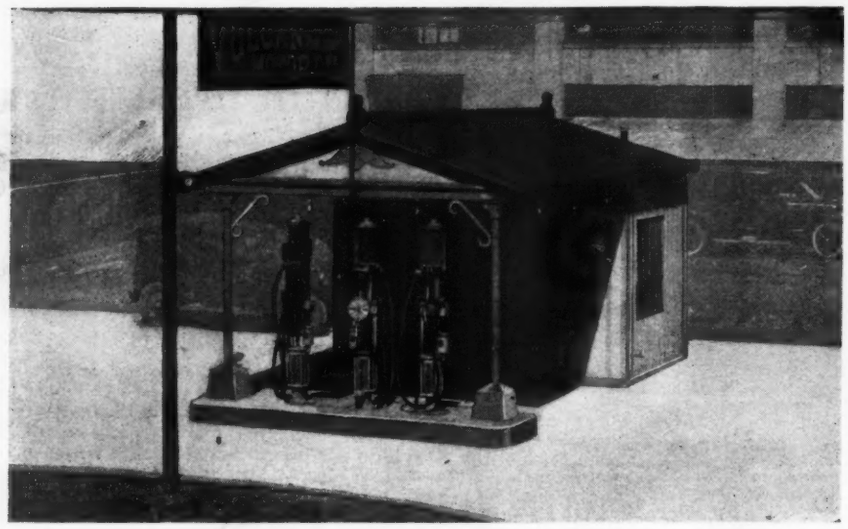
1. Automatic Cold Junction Compensation Patented December 28th, 1920.
2. Automatic Temperature Control
3. Brown country-wide Pyrometer Engineering Service—always available to install, check or extend your installation as desired.

Let us help you solve your temperature problems.

Address—The Brown Instrument Company, 4518 Wayne Avenue, Philadelphia, Pa., or one of our district offices in New York, Boston, Pittsburgh, Detroit, Chicago, Birmingham, Houston, Tulsa, St. Louis, Denver, Salt Lake City, San Francisco, Los Angeles or Montreal.

Brown Pyrometers

Most Used in the World



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We manufacture the simplest to the most elaborate Stations. Put your own individuality in your Filling Stations—Let us help you work this out.

The Edwards Manufacturing Co.

524-544 Eggleston Ave. **Cincinnati, Ohio**

Hotel Lassen

WICHITA

Economy in management enables the Lassen to offer popular prices, yet service is on a par with the leading hotels in larger cities. Right in the business, theater and shopping district.

350 FIRE PROOF ROOMS

From **$2.00** *per Day*

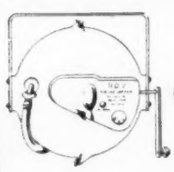
Rate Schedule Which Never Changes

	1 per.	2 per.
42 Rooms, Lavatory.....	$2.00—	$3.00
82 Rooms, Private Bath...	2.50—	4.00
83 Rooms, Private Bath...	3.00—	4.50
39 Rooms, Private Bath...	3.50—	5.00
35 Rooms, Private Bath...	4.00—	5.50

Large parlor rooms—twin beds for two persons—at prices slightly above this schedule.

Nearly Everybody Stops at the Lassen

HOTEL LASSEN
WICHITA KANSAS



Roy Way

# of Dispensing Grease Accurately— *for Transmission & Differential*

Holds 100 pounds of transmission and differential grease.

Unique and patented construction assures smooth, solid delivery with an entire absence of air pockets even in cold weather.

Registers with absolute accuracy the quantity of grease delivered.

Delivers more grease with less effort than any other apparatus in the field.

The removable head allows quick refilling with least effort.

Specifications

TANK—Steel welded, 12 in. Diameter; 27 in high; Capacity 100 lbs.
WHEELS—10 in. Diameter
BASE—Steel plate.
Hose—5 ft. flexible combination.
WEIGHT—60 lbs.
SHIPPING WEIGHT—85 lbs.

"Sealed by Bureau of Standards in Massachusetts"

Roy Manufacturing Co., Inc.

Quincy, Massachusetts

ON THE LAZY BENCH

A BRASS band once visited a small village and the people were delighted with it, but they couldn't make heads nor tails of the trombone, so they sent for Old Pegleg Hoskins, who claimed he understood music.

Well, Old Pegleg watched the performance of the trombone player for some time. Then he said, with a sneer: "Take no notice of him, fellows. There's a trick in it; he don't swallow it every time."

—Magnolia Oil News

◈ ◈ ◈

Lessened the Shock

Mose Lightfoot, one of the best hod carriers on the job, lost his footing and fell to the street, four stories below.

Mose hit on his head, struck the cement pavement and went through to the basement.

When the foreman went to the basement, expecting to find Mose cold and stiff, he met Mose coming up the steps.

"Great Scott, man, aren't you killed?" he cried.

"No," Mose replied, dusting off his clothes. "I guess dat concrete pavement musta broke my fall."

—Pure Oil News

◈ ◈ ◈

Maybe So, Maybe So

Easy payments.

Your money cheerfully refunded.

"I get twenty-five miles to the gallon."

In ten easy lessons.

"You can be this man!"

Power of will.

Pre-war stuff.

"And they lived happily ever after."

$500 a week in your spare time.

"I long for home life," said the movie star.

—Magnolia Oil News

◈ ◈ ◈

"Your Honor, I was not intoxicated."

"But the officer says you were trying to drive the Ford up a lamppost."

"Maybe I was, your Honor. But a couple of crocodiles had been following me around all evening and I don't mind telling you they were getting on my nerves."

—Kansas Oil News

◈ ◈ ◈

Nagging Wife (as bedtime hour approaches): "Is everything shut up for the night?"

Mr. Henpeck: "That depends on you—everything else is."

—Atlantic Seal

The Danger of Hootch

A well dressed man dropped into the oculist's chair and rubbed his tired eyes.

"Better fix me up with some glasses, Doc," he said to the specialist. "My eyes are going back on me."

"All right," answered the doctor, "What style have you been wearing?"

"Me? I've never worn spectacles in my life. Never needed them before."

"My mistake, but I judged from the mark on your nose that you were accustomed to using them."

"Oh, that mark? I get that from drinking hootch out of fruit jars."

—Pure Oil News

◈ ◈ ◈

All Set

The prisoner was not professionally represented. Before proceeding with the case the judge said:

"This is a very serious offense you are charged with. If you are convicted it means a long term of imprisonment. Have you no counsel to look after your defense?"

The prisoner, in a most confidential manner, leaned toward the judge and replied:

"No, your honor, I have no counsel; but I have some very good friends on the jury."

—Magnolia Oil News

◈ ◈ ◈

Gee: "I see Sadie has a job in the chorus."

Goo: "Sure and she's getting fifty per week. All she does is shout 'Hip, hip, hurray'."

Gee: "Oh. She gets ten bucks for her 'hurray' and the other forty for her 'hips'."

—The Booster

◈ ◈ ◈

Conversation in a Drug Store

"Gimme a tablet."

"What kinda tablet?"

"A yellow one."

"But what's the matter with you?"

"I want to write a letter."

—Bottles

◈ ◈ ◈

Jones: "Why in the world does Goldrox ride in such a rattle trap of a machine."

Bones: "Claims the noise of the car drowns out his wife's talking."

—Kansas Oil News

PETROLEUM
and its Products

WRITE OR WIRE
FOR QUOTATIONS

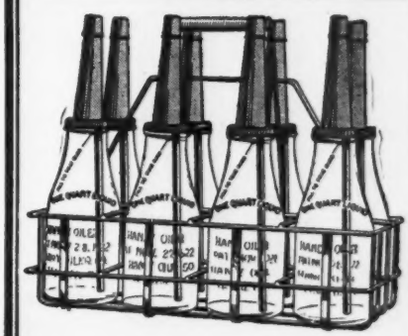
Marietta, Ohio Refinery
operated on Pennsylvania Crude

Findlay, Ohio Refinery
operated on Ohio Crude

Coffeyville, Kansas Refinery
operated on Midcontinent Crude

The
NATIONAL REFINING Co.
National Headquarters
NATIONAL BLDG.
CLEVELAND OHIO

3 MODERN REFINERIES
COFFEYVILLE, KAN.-FINDLAY, O.
MARIETTA, O.



THE Handy Oiler was the first device of the kind placed on the market and no similar article has been perfected which can compete with it successfully. The dispensing spout connects to the container with a continuous screw thread, fills without removing and automatically regulates the flow of oil.

Approved by the Inspector of Weights and Measures

These prices are subject to the regular discounts.

LIST PRICES

Complete Outfit	$10.00
Handy Oiler Container and Spout	1.00
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SINCLAIR OILS

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REFINERY-TANK WAGON MARKETS

Gasoline Prices Improve Slowly in Chicago Resale Market

TULSA, May 23

CONTINUATION of the recent upward movement in gasoline prices coupled with quickening demand and seasonable weather, an advance of 25 cents in prices of Pennsylvania crudes in addition to a double-barreled advance in price of Smackover heavy crude totaling 20 cents this week, were important factors in a market which now appears to be on the threshold of a period of intense activity.

Steady buying of gasoline, with the general belief that jobbers were coming into the market very largely because they need material for immediate delivery, gave the bearish element less hope that this week's improvement would be followed by a lull or reaction later. In fact, more talk of a possible Mid-Continent crude price advance with higher tank wagon prices in Standard Oil Co. of Indiana territory was heard in the last few days than for some time.

Domestic consumers have supplied the momentum for higher prices on heavier grades of gasoline, and exporters have prevented any accumulation of high gravity material worth mentioning. The advance of ½ cent per gallon in export gasoline by Standard Oil Co. of New Jersey has increased by that amount the per gallon revenue of refiners supplying 64-66, 375 end point gasoline to that purchaser.

Natural Gasoline Tight

Natural gasoline, one grade of which has practically doubled in price in the last five weeks due to active demand and present scarcity, continued tightly sold up, and manufacturers in a great number of instances were compelled to turn down urgent requests for prompt shipment on all grades. Heavy oils were helped by Smackover crude advances, and by the purchase of some 5,000,000 gallons of gas oil in Oklahoma and north Texas by the Atlantic Refining Co. to whom refiners will ship over 30 days for export.

One indication that refiners themselves have more faith in the present market outlook is the fact that there is little inclination to sell most products over any long future period at today's spot prices. This is particularly true of gasoline, and largely true of fuel oil, although there is plenty of argument pro and con regarding the summer's fuel oil prices. Most refiners, however, were not so optimistic regarding kerosene, and little more than steady or slightly improved prices are generally expected.

Gasoline Situation Sound

Statistically, evidence continues to point to the soundness of the Mid-Continent gasoline situation insofar as stocks now on hand are concerned. In the week ended May 15, the 120 refiners that report to National Petroleum News had shipped 31,810,098 gallons, and had reduced their total stocks over 2,000,000 gallons to 76,238,459 gallons, which represented only 17 days' supply at the rate of shipment for that week. Three-fourths of this reduction in stocks was in Oklahoma and north Texas, and the remainder in Kansas.

The price curve for U. S. Motor has gradually swung upward this month since the purchase in the second week of some 4,000,000 gallons by the Carter Oil Co. for the Standard Oil Co. of Louisiana, for which it paid 10½ to 10¾ cents per gallon. Steady support by the jobber buying so largely for immediate needs has been ascribed by refiners as an important cause for the present firm market. Refiners feel that the law of supply and demand was following more truly its natural course than it did early in the year when successive crude advances caused such wild buying and swiftly advancing prices.

Little Gasoline Below 12

U. S. Motor was generally bringing around 11½ cents Monday and marketers were able to find only scattered lots below this price. With steady demand aiding the price structure, refiners were successful in gradually moving the selling figures to 11¾ and 12 cents, and at the close of the market today this grade at under 12 cents was considered a fortunate purchase by jobbers and marketers alike. Predictions of considerably higher June prices were made more freely by observers who advanced low jobber stocks and heavy summer demand as contributing factors.

As regards a crude price advance, several refiners said they believed it might come at an early date, particularly in the higher gravities. There are others, however, who felt that an advance now might prove to be premature and would again invite the possibility of a tumble in prices if large crude production were again developed.

The higher gravity gasolines continued to find a ready market, and several refiners were keeping their stocks well cleaned up. The 60-62, 400 end-point grade was held around 13¼ cents or higher at the end of the week, and one exporter purchased more than a half-million gallons of 64-66, 375 end point at 14¼ cents for shipment over June. Several refiners were holding this grade at 14½ cents. Comparatively little spot material was being offered.

Casinghead Demand Grows

Demand for natural gasoline was greater than available supply and following the heavy advances of the past month, prices again advanced almost 1½ cents on all grades this week. Grade C, which was held at around 7 cents on April 13, was quoted and firmly held at 13¾ cents today, and many manufacturers could have moved considerably more of all grades had they not been tightly sold up. Grade B commanded 13¾ cents and Grade A moved at from 13¾ to 14 cents.

Heavy export and domestic demand for refinery gasoline, the increase in which has been variously estimated up to around 30 per cent over last year, and increased use by cracking plants to bring their product to desired consistency, has called for the use of a much greater quantity of naturals. Their

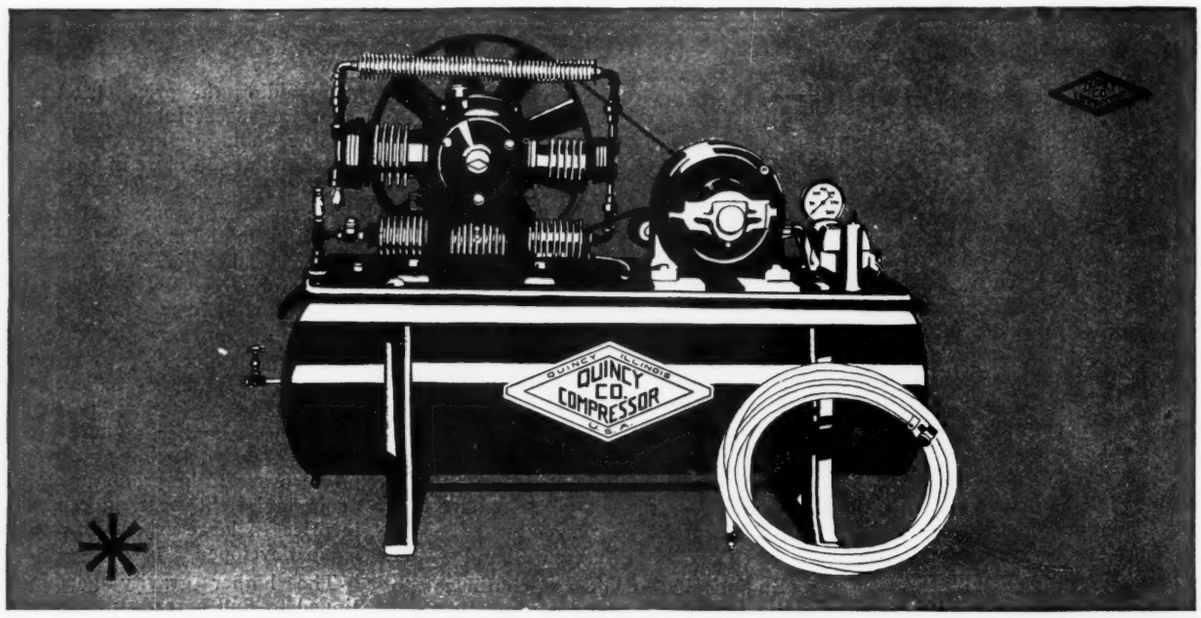
(Continued on page 117)

All prices and market information printed herein have been gathered by the staff of National Petroleum News from reliable sources and so far as can be ascertained thoroughly represent the going market as defined for each product on the date given for those particular prices. Both buyers and sellers have been checked in the gathering of this information and actual sales studied.

These prices and this information are subject at all times to correction for errors. Anyone having knowledge of any facts which would indicate anything different from the information which is given, is especially urged to send in those facts to the head office of National Petroleum News at once, or take them up with the nearest representative. All such facts will be promptly and thoroughly investigated.

The staff of National Petroleum News is cognizant of the fact that this market information has come to have a high standing in the industry. It wants to not only maintain that standing, but to improve it and to that end, invites the co-operation of the entire oil industry.

We know our business



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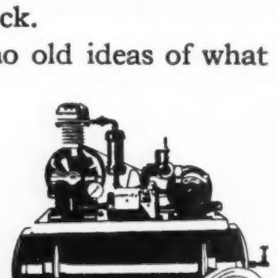

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Refinery Markets on Light Oils and Lubricants

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

GASOLINE AND NAPHTHA

	Prices May 25	Prices May 18	Prices May 11
PENNSYLVANIA			
52-54 Naphtha	13⅜-14	13 -13¼	12⅝-12¾
54-56 Naphtha	13¾-14¼	13¾-13¾	12¾-13
58-60 Gasoline	14½-15	13¾-14	-13¾
60-62 Straight-run gasoline	15 -15⅛	14⅝-15	14 -14⅛
62-64 Straight-run gasoline	15⅛-16	15 -15⅛	14⅛-14⅜
64-66 Straight-run gasoline	16 -16⅛	15⅝-16	-15
68-70 Straight-run gas. 350 E.P.	17 -17⅛	16 -16⅛	15¼-15⅜
68-70 Straight-run gas. 305-320 E.P.	18⅛-19	17¾-18	17 -18
70-72 Straight-run gas. 300-305 E.P.	-20	-19	18⅛-19
OKLAHOMA			
48-50 450 E. P. naphtha	11 -11¼	10⅜-10¾	10⅜-10⅝
50-52 450 E. P. naphtha	11⅛-11⅜	10⅜-10⅝	10⅜-10⅝
56-58 450 E. P. gasoline	11⅜-11¾	11 -11⅛	-10⅜
58-60 U.S. Motor 437 E.P.	-12	-11⅜	11 -11⅛
60-62 400 E. P. gasoline	13¼-13⅝	-12¾	12⅛-12⅜
64-66 375 E. P. gasoline	14¼-14½	12¾-13	13¼-13⅝
68-70 350 E. P. gasoline	14¾-15	-14¾	-13¾
NORTH TEXAS			
48-52 450 E. P. naphtha	-10¾	10⅜-10¾	10¼-10⅜
56-58 450 E. P. gasoline	11⅜-11⅝	10¾-10⅞	10⅝-10¾
58-60 450 E. P. gasoline	-11¾	11 -11⅜	-10¾
58-60 U. S. Motor gasoline	-12	11¼-11⅜	-11
60-62 400 E. P. gasoline	-13¼	-13	12¾-12⅝
64-66 390 E. P. gasoline	14 -14¼	13¾-13¾	13 -13¼
64-66 375 E. P. gasoline	-14½	14 -14¼	13¾-13⅝
68-70 350 E. P. gasoline	14¾-15	14¼-14½	-13¾
NORTH LOUISIANA			
58-60 450 E. P. gasoline	11¾-12	11¾-11¾	-11¼
58-60 437 U. S. Motor gasoline	12 -12⅛	11⅞-12	-11⅜
64-66 375 E. P. gasoline	-14½	-14¼	-13½
ARKANSAS			
58-60 450 E. P. gasoline	12¼-12⅜	11¾-11¾	11⅜-11⅜
58-60 U. S. Motor gasoline	12⅜-12¾	11⅞-12	11⅜-11¾
64-66 375 E. P. gasoline	14¾-15	14 -14¼	-14
CALIFORNIA			
54-56 U. S. Motor gasoline	-11	-11	-11
42-45 Engine distillate, 445-480 E.P.	7½- 9½	7½- 9½	7½- 9½

Note: This is without the 2-cent state tax included in the price of California refiners for shipments within the state.

NEW ENGLAND

(F. O. B. Boston and Fall River)

U. S. Motor gasoline	-14¾	-14¾	-13½

NATURAL GASOLINE

OKLAHOMA			
Grade Double A	14 -14¼	-12½	-11¼
Grade A	14 -14¼	-12½	-11¼
Grade Double B	-14	12¾-12½	-11
Grade B	-14	12¾-12½	-11
Grade C	-14	12¾-12½	-11

NOTE—Specifications adopted by Ass'n of Nat. Gaso. Manufacturers:
Grade Double A—80-87.9 gravity, 90% recovery, not over 375 E. P.
Grade A—72-79.9 gravity, 90% recovery, not over 375 E. P.
Grade Double B—84-92 gravity, 85% recovery, not over 375 E. P.
Grade B—76-83.9 gravity, 85% recovery, not over 375 E. P.
Grade C—80-90 gravity, 78% recovery, not over 375 E. P.

NORTH TEXAS			
*Grade Double A	14 -14¼	-12½	-11¼
*Grade A	14 -14¼	-12½	-11¼
*Grade Double B	-14	12¾-12½	-11
*Grade B	-14	12¾-12½	-11
Grade C	-14	12¾-12½	-11

*F. O. B. Breckenridge.

CALIFORNIA			
73-78 375 E. P.	12½-13	12¾-13	12¾-13½
OKLAHOMA NATURAL GASOLINE—BLENDS			
64-66 435-440 E. P.	-11¾	11 -11¼	10¾-11
NORTH TEXAS			
64-66 435-440 E. P.	11¾-12	-11	-10¾
PENNSYLVANIA			
68-70 Grav. 437 E. P.	-14½	13½-13¾	-13
64-66 Grav. 437 E. P.	-14½	13½-13¾	-13
60-62 Grav. 437 E. P.	-14½	13½-13¾	-13
68-70 Grav. 420 E. P.	-15	14 -14½	-13½
68-70 Grav. 400 E. P.	-15¼	14¼-14½	-14

BURNING OILS

PENNSYLVANIA			
45 Water White Kerosene	6¾- 6⅞	6¾- 6⅞	6¾- 6⅞
46 Water White Kerosene	6¾- 7	6¾- 7	6¾- 7
47 Water White Kerosene	7⅛- 7¼	7⅛- 8	7⅛- 8
300 Burning Oil	7¼- 7¾	- 7⅛	- 7⅛
OKLAHOMA			
40-42 Prime White Distillate	3⅞- 4	3⅝- 3⅞	3⅝- 3⅞
41-43 Water White Kerosene	4¼- 4½	4⅜- 4⅜	4⅜- 4¾
42-44 Water White Kerosene	- 4¾	- 4½	
NORTH TEXAS			
41-43 Water White Kerosene	4⅜- 4½	4 - 4¼	- 4
42-44 Water White Kerosene	4⅜- 4½	4¼- 4½	4⅜- 4½
NORTH LOUISIANA			
41-43 Water White Kerosene	4½- 4¾	- 4½	- 4½
ARKANSAS			
42-44 Water White Kerosene	5 - 5¼	- 4¾	4¾- 5
CALIFORNIA			
40-42 Water White Kerosene	7½- 8	7½- 8	7½- 8
NEW ENGLAND			
(F. O. B. Boston and Fall River)			
40-43 Water White Kerosene	- 7⅛	- 7	- 7

NEUTRAL OILS

PENNSYLVANIA			
(Viscosity at 70 °F.)			
220 Vis. No. 3 Assoc. Filt	-27	25½-26	-26
200 Vis. No. 3 Assoc. Filt	23½-24	22 -23	-22
180 Vis. No. 3 Assoc. Filt	21½-22	20 -21	-20
150 Vis. No. 3 Assoc. Filt	19½-20	18 -19	-18
(Non-Viscous)			
34 Grav. 350-360 Flash	7¾- 8	7¾- 8	7¾- 8
36 Miners Neutrals 300-305 Flash	7½- 7¾	7 - 7¼	7¼- 7½
OKLAHOMA			
(Viscosity at 100 °F.)			
70 Vis. No. 2½-3 color	6 - 6¼	6 - 6¼	6 - 6¼
100 Vis. No. 2 color	6 - 6¼	6 - 6¼	6 - 6¼
100 Vis. No. 2½-3 color	5¾- 7⅛	5¾- 7⅛	5¾- 7⅛
150 Vis. No. 3 color	10¾-11	10¾-11	10¾-11
150 Vis. No. 4 color	10½-10¾	10½-10¾	10½-10¾
180 Vis. No. 3 color	11¼-11½	11¼-11½	11¼-11½
180 Vis. No. 4 color	11 -11¼	11 -11¼	11 -11¼
180 Vis. No. 5 color	10 -11	10 -11	10 -11
200 Vis. No. 3 color	11½-12	11¼-12	11½-12
200 Vis. No. 4 color	12 -12¼	12 -12¼	12 -12¼
200 Vis. No. 5 color	11 -12	11 -12	11 -12
220 Vis. No. 3 color	14¼-15	14¼-15	14¼-15
220 Vis. No. 4 color	14¼-14½	14¼-14½	14¼-14½
220 Vis. No. 5 color	13 -14	13 -14	13 -14
240 Vis. No. 3 color	16 -16½	16 -16½	16 -16½
240 Vis. No. 4 color	15¾-16	15¾-16	15¾-16
240 Vis. No. 5 color	15 -15½	15 -15½	15 -15½
280 Vis. No. 3 color	17¾-18	17¾-18	17¾-18
280 Vis. No. 4 color	16¾-17	16¾-17	16¾-17
280 Vis. No. 5 color	15¾-16	15¾-16	15¾-16
300 Vis. No. 5-6 color	18 -18½	18 -18½	18 -18½
GULF COASTAL			
(Viscosity at 100 °F; cold test 0)			
100 Vis. No. 2 Color Unfilt. Pale	8½- 9	8½- 9	9 - 9½
200 Vis. No. 3 Color Unfilt. Pale	13 -13½	13 -13½	13½-14
300 Vis. No. 3 Color Unfilt. Pale	15½-16	15½-16	16 -16½
500 Vis. No. 3½ Color Unfilt. Pale	17½-18	17½-18	18 -18½
750 Vis. No. 4 Color Unfilt. Pale	22½-23	22½-23	23 -23½
200 Vis. No. 5½ Color Red Oil	11½-12	11½-12	12 -12½
300 Vis. No. 5½ Color Red Oil	13½-14	13½-14	14 -14½
500 Vis. No. 6 Color Red Oil	15½-16	15½-16	16 -16½
750 Vis. No. 6 Color Red Oil	19½-20½	19½-20½	20 -21
CALIFORNIA			
(Viscosity at 100 °F.)			
100 Vis. No. 2 color	13½-14½	13½-14½	13½-14½
100 Vis. No. 3 color	9 -10	9 -10	9 -10
200 Vis. No. 3 color	14½-15½	14½-15½	14½-15½
300 Vis. No. 3 color	14 -16	14 -16	14 -16
450 Vis. No. 3½ color	19½-20½	19½-20½	19½-20½
550 Vis. No. 3 color	21½-22½	21½-22½	21½-22½
600 Vis. No. 3½ color	23½-24½	23½-24½	23½-24½
100 Vis. No. 5 color	8 - 9	8 - 9	8 - 9
200 Vis. No. 5 color	13½-14½	13½-14½	13½-14½
300 Vis. No. 5 color	14 -15	14 -15	14 -15
400 Vis. No. 5 color	16 -17	16 -17	16 -17
500 Vis. No. 5 color	17 -18	17 -18	17 -18
600 Vis. No. 6 color	18 -19	18 -19	18 -19
700 Vis. No. 7 color	19½-20½	19½-20½	19½-20½

CYLINDER STOCKS

OKLAHOMA			
190-200 Vis. at 210° Bright Stock	31 -36	31 -36	31 -36
150-160 Vis. at 210° Bright Stock	28 -32	28 -32	28 -32
600 E Stock, 140-150 Vis. @ 210°	18¾-20	18¾-20	15 -20
600 Steam Refined Olive Green	9 -11	9 -11	9 -11
600 Steam Refined Dark Green	6 - 8	6 - 8	6¾- 8
Black Oil	4¾- 5	5¼- 5½	5¼- 5½
PENNSYLVANIA			
(1-inch Immersion Test)			
600 Steam Refined	19 -19½	17½-18	17½-18
635 Steam Refined	24½-25	23 -24	24½-25
650 Steam Refined	26½-27	24 -25	26 -26½
600 Flash	29 -30	27 -29	29 -30
600 Warren E	24 -24¼	23½-24	24 -24½
600 Oil City E	23 -23¼	22½-23	23 -23½
600 Filtered D	29 -30	29 -30	29 -30
Cold Test Stocks (bright filtered)	38 -39	37 -39	37 -38
Cold Test Stock (dark filtered)	36 -37	35 -36	35 -36
Black Oil	8 - 8¼	8 - 8¼	8 - 8¼

(Note—Prices of total immersion test goods average 1 to 2 cents per gallon higher.)

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

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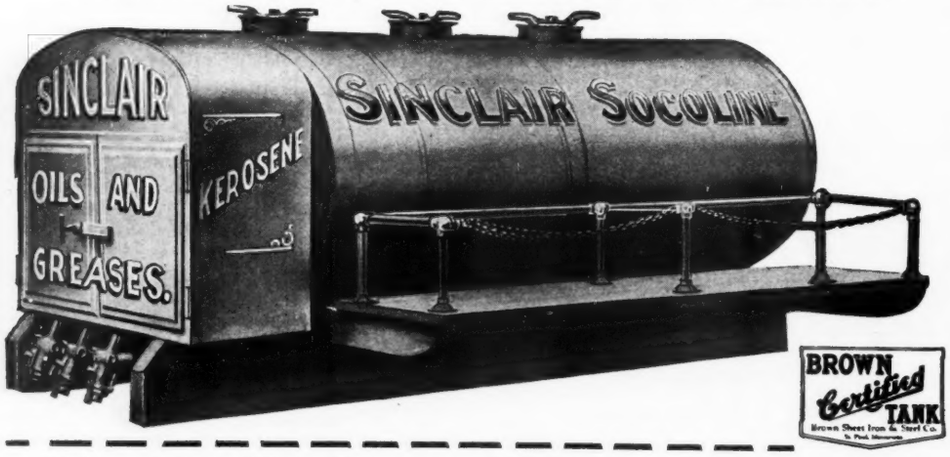

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Refinery Markets on Wax and Heavy Oil Products

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

WAX

PENNSYLVANIA	Prices May 25	Prices May 18	Prices May 11
	(Per Pound New York)		
122-124 White Crude Scale.	– 5¼	– 5¼	5¼– 5¼
124-126 White Crude Scale.	– 5½	– 5½	– 5¼
OKLAHOMA			
	(Per Pound Group 3)		
124-126 White Crude Scale.	5 – 5¼	– 5	4¾– 4¾
CALIFORNIA			
White Crude Scale.....	7½– 8	7½– 8	7½– 8

FUEL OIL

PENNSYLVANIA			
36-40 Fuel Oil.....	5¼– 5½	5¼– 5½	5¼– 5½
30-34 Fuel Oil.....	5 – 5¼	5 – 5¼	– 5
28-30 Fuel Oil.....	5 – 5¼	5 – 5¼	– 5
OKLAHOMA			
38-40 Straw distillate.....	3¼– 3¼	3 – 3¼	3 – 3¼
36-38 Straw distillate.....	3 – 3¼	– 3	– 3
32-36 Gas oil.....	– 3	2¾– 2¾	2¾– 2¾
28-30 Fuel oil (Bbl.).....	.97½–1.00	.95 – .97½	.95 –.97½
24-26 Fuel oil (Bbl.).....	.95 – .97½	.90 – .95	.90 –.92½
24-26 Fuel oil (Buyers' cars)	.95 – .97½	.90 – .95	.87½–.92½
20-22 Fuel oil (Bbl.).....	– .92½	– .90	.87½–.90
50-60 Asphaltic content road oil.....	1.10-1.15	1.10-1.15	–1.25

NORTH TEXAS	Prices May 25	Prices May 18	Prices May 11
36-40 Straw Distillate.....	3¼– 3¼	3¼– 3¼	3¼– 3¼
32-36 Gas Oil (Gal.).....	2¾– 3	2¾– 3	2¾– 3
24-26 Fuel, per bbl.....	.90– .95	.85 – .90	.87½– .90
GULF COASTAL			
Fuel.....	1.70 –1.80	1.70 –1.80	1.70 –1.80
Gas Oil.....	5¼– 5½	5¼– 5½	5¼– 5½
NORTH LOUISIANA			
32-36 Light Gas Oil (Gal.)	3¼– 3½	3¼– 3¼	3¼– 3¼
18-22 Fuel Oil (Bbl.).....	.95 –1.00	.90 – .95	.85 – .90
ARKANSAS			
32-36 Gas Oil.....	– 3½	– 3¼	3¼– 3¼
Smackover fuel (processed)	.95 –1.00	.85– .90	.80– .85
Road Oil.....	– 3	– 3	3 – 3½
CALIFORNIA*			
14-18 Fuel Oil (Bbl.).....	1.50	1.50	1.60
14-18 Bunker Oil (Bbl.)...	1.50	1.50	1.60
24-30 Gas Oil (Bbl.).....	1.75	1.75	1.85
27 + Diesel Oil (Bbl.).....	1.75	1.75	1.85

*Prices at southern California points. Prices at San Francisco and other coast points 5c per bbl. higher. San Joaquin valley 10c per bbl. less.

NEW ENGLAND (F. O. B. Boston and Fall River)			
30-32 gas oil (gal.).....	– 5¾	– 5¾	– 5¾
Fuel Oil (Bunker C) bbl...	–1.80	–1.80	–1.80

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

(Continued from page 113)

production, which is more or less of a constant quantity, has not been sufficient to supply refiners' needs.

Refiners declared they cannot continue to pay present high prices for naturals unless further advances occur in the finished products, as all grades of naturals were around 1¾ cents higher than U. S. Motor. While the present market is all in the seller's favor, some manufacturers, viewing the recent swiftly advancing prices, appeared somewhat skeptical as to the course of the market over June. Others indicated that heavy summer demand for refinery gasoline would call for enough naturals to at least hold prices to present levels.

Kerosene Remains Firm

Kerosene remained firm with some tendency to advance quotations, and the 41-43 water white was moving in fair quantities at 4¼ cents, with some sales at 4½ cents. The 42-44 water white was less freely available at 4½ cents, although the general market ranged from 4½ to 4¾. At least one refiner said his sales around 5 cents were taking care of present output. Demand generally was only fairly active.

Refiners advanced their quotations on gas oil to 3 cents, and buyers seeking cheaper material Saturday were having only limited success. The large purchase by the Atlantic Refining Co. for export shipment immediately added strength to the market, and refiners were also reporting more demand for cracking purposes. With these exceptions, buying was not heavy.

This week's Smackover heavy crude advances resulted in higher prices in fuel oils. The lower gravity fuel, which had been offered at 90 cents, disappeared from the market, and this grade was held at 92½ cents. The 24-26 gravity was quoted at from 95 cents to $1.00, and the higher gravities in proportion. Greater gasoline production is expected to add to stocks of fuel oil, although demand from cracking plants will at least partly offset this.

Lubricating oils were generally steady with no price adjustments reported. Wax firmed somewhat, and one refiner sold a quantity of 124-126 white crude scale material at 5¼ cents, and said he was compelled to refuse business on several hundred tons additional at this price because of his inability to supply it.

Gasoline Prices Continue Upward In Oklahoma; Naturals Soar

Staff Special
CHICAGO, May 23

JOBBERS buying only what they needed to supply their trade and keep a safe reserve in storage has built up a wholesome price advance in gasoline over the past week. There has been little or no speculative buying on the part of jobbers. Refiners and carload marketers report that orders have continued small all spring, but growing more numerous as warm weather came on.

Of course it is reasonable to believe that most jobbers are allowing their stocks to build up, buying a little more than their requirements while the turnover is rapid—just as they buy less than their needs in the fall when the turnover is slow. But betting on the market by jobbers has been an insignificant element in the market all spring.

At the end of this week the prevailing quotation on U. S. motor gasoline was 12 cents but business was done over the week at fractions below 12 cents. In fact a few sources of supply were quoting 11¾ on Friday but were not getting all the business. Dealers in the Chicago resale market whose business it is to keep in touch with production and consumption tendencies, were bullish today in their judgment of the coming week's volume of trade. In spite of the fact that the gasoline market usually experiences a dip in Chicago between the 25th and 30th of each month, such a reaction is not expected this week. Marketers have comparatively little material bought over the month that must be sold. Furthermore, the next to last day of the month is Memorial Day.

Looking forward toward June, the entire petroleum community in Chicago is bullish. Reasonable demands of the season will increase business, it is believed. There is comparatively little dealing in futures. One refiner offered U. S. Motor gasoline over the first half of June at 12¼ cents a gallon, but that was to a broker for resale.

Slight improvement in the kerosene price is observed this week over last. Refined oil of 41-43 gravity is quoted at 4½ cents and can be shaded, while 42-44 material is quoted up to 4¾ cents. There has been little increased activity this week, if any. Such improvemnet in volume shown in kerosene this year over last is due to higher gasoline prices. Not that kerosene gathers much firmness from gasoline by way of sympathy, but

(Continued on top of next page)

farmers actually burn less kerosene in their tractors when gasoline is cheap.

Stove distillate is pretty dead. The price is flat on top of the gas oil price, and the demand is of no moment. Prevailing quotation on distillate is 3 to 3¼ cents and gas oil is 3 cents flat.

Refinery fuel oil is probably a little firmer than last week at 95 cents a barrel. As far as is known, no quotations are being made under that figure on 24-26 now, although the price could have been shaded last week. There is something to be gained by quoting 24-26 firm at 95 cents for at that figure it is the cheapest oil fuel in the market. Smackover fuel prices went higher than those of refinery fuel last Friday when heavy Smackover crude oil was advanced 10 cents at the well. The 10-cent advance was tacked on the price of crude fuel also, fixed the price at 95 cents to $1.

Pennsylvania Gasoline and Lubes Rise With Crude Price Boost

CLEVELAND, May 26.—The 25-cent advance in price of Pennsylvania grade crude oils on May 20 resulted in a strengthening of all products except kerosene, fuel oil and filtered stocks. It tended, however, to firm kerosene and filtered stocks, the latter of which may be expected to advance shortly because steam refined stocks are now 1½ to 2 cents higher than a week ago.

Perhaps the greatest improvement in the northwestern Pennsylvania markets in the last week is the advance taken by the viscous neutrals. These oils have been rather dull all spring and lagging behind all other products in upward price movements. Buying has been steady but it lacked the impetus to push the neutrals into the active class. Slightly increased buying came in the last few days after refiners had advanced their quotations as soon as crude oil prices were raised 25 cents per barrel. This advance evidently was the needed stimulus.

Demand for steam refined stocks has been rather steady all along but orders of from a few barrels to a tank or car load have been more frequent in the last few days. Why filtered stocks have not kept pace with steam refined stocks has been almost a puzzle. One of the largest manufacturers of filtered stocks reports he is practically sold up and other refiners say the movement is satisfactory. Bright stocks have acted about the same as the filtered goods.

Until the cold wave hit the northeastern part of the country late Saturday and Sunday, gasoline buying was brisk. Buying today was somewhat lighter, refiners reported, as jobbers evidently believed they could delay for a day or two following the fall of hail and snow through Ohio, western Pennsylvania and western New York.

Jobbers, or dealers as they are sometimes called in the Pennsylvania market, in this territory have considerable gasoline in their storage tanks. They are in position to sit rather easily over the Memorial Day holiday, one sales manager said Saturday after a trip through western New York. Many jobbers have gasoline coming in now that they bought a few weeks ago before the Mid-Continent market started rising. But the amount of spot gasoline in the Pennsylvania refinery market is comparatively small so a continued strong market may be expected.

An increase in the tank wagon price of gasoline is expected daily in Pennsylvania. The price in that state is 19 cents without the tax while across the line in New York the price is 21 cents. With present prices of gasoline at Pennsylvania refineries, the jobber in that state has a gross margin of about 3½ cents and sometimes less, while in New York the margin is better than 5 cents even on Mid-Continent gasoline.

Kerosene has been a little firmer. One of the larger refiners in the state advanced his quotations ¼ cent today to 6¾ cents for 45 water white and 7¼ cents for 46 but the market was still running 6¼ to 6½ cents for the 45 and 6¾ to 7 for the 46. However, amounts available at the inside prices seemed to be diminishing. The optimistic operator said he was sold up on kerosene for the present.

Following the improvement in the gasoline market and the advance in crude prices, fuel oil rallied for several days. Some refiners were asking as high as 5¾ cents for 36-40 straw color oil which they are using as a charging oil for cracking stills, but the price eased off during the latter part of the week and the price range was topped at 5½ cents today. Demand has been spotty in the last few days.

Paraffin wax has been firm and scarce. Refiners point to the fact that stocks of wax held at refineries in the last three months have been the lowest since the Bureau of Mines started keeping refinery statistics seven years ago and predict higher wax prices. Five years ago when stocks of wax were double present stocks 122-124 white crude scale was bringing 8¼ to 8½ cents per pound, New York, or better than 3 cents per pound more than at present.

Kentucky

Central Kentucky gasoline markets are more active and stronger and prices are higher than a week ago. One plant is sold up over rest of May. Burning oils were steady although price of crude has advanced. Prices today at central Kentucky plants were: 58-60 gasoline, 14 cents; 60-62 gasoline, 15; 64-66 gasoline 16½; 42-44 water white kerosene, 7; 34-38 gas oil, 5, and 24-26 fuel oil, 4 cents. All markets were strong at Louisville and there were rumors that tank wagon prices of gasoline may be advanced soon in this territory.

Weeks Price Changes Tank Wagon Market

Gasoline Changes

Standard of New York—T.w. and s. s. prices reduced 2 cents in greater New York and Albany, May 21. T. w. at Albany is 19 cents, s. s. 21 cents. T. w. and s. s. prices advanced 2 cents in greater New York only, to 20 and 22 cents respectively, May 25.

Other marketing companies met this advance excepting The Texas Co. which is still selling at 18 cents at the tank wagon.

Standard of Kentucky—T. w. and s. s. prices reduced 2 cents at Lexington, Ky., only, to 19 and 22 cents respectively, including 3 cents tax, May 18.

Magnolia Petroleum—T. w. and s. s. prices at Muskogee, should have been 19.5 and 22.5 cents respectively since March 25. There was no change at Muskogee on April 8, as reported in April 15 issue of National Petroleum News, according to a re-check of prices by Magnolia Petroleum Co.

Tank wagon prices in Texas advanced to 18 cents at most points where former prices were below 18 cents, May 22, and s. s. prices advanced accordingly. Houston, El Paso, Dallas and Fort Worth were included in advance, each of these points advancing 1 cent.

Canada—S. s prices advanced 1 cent in New Brunwick and Nova Scotia, and 3 cents at Charlottetown, P. E. I.

* * *

Kerosene Changes

Magnolia Petroleum—Reduced 1 cent at Muskogee to 11 cents, May 2.

Motor Benzol Firmer

NEW YORK, May 27.—Reflecting the decline in production due to the decreased activity in the steel industry, prices for motor benzol were much firmer toward the end of the week, and there was virtually nothing available for spot delivery. Were they able to supply spot goods, leading distributors say they would demand 23 cents a gallon, tank cars, ovens, or 1 cent above last week's closing prices. They could not fill spot orders were buyers willing to pay 30 cents a gallon, according to one big factor.

Export demand has improved but there is nothing available to take care of the foreign buyer's requirements. Consumption, is gaining steadily, both here and abroad and in view of the fact many of the big marketers are sold up for many months ahead, it is not likely that much spot benzol will appear on this market for some time.

MARYVILLE, Mo.—Harry Mutz has been busy the past month installing new equipment and moving storage tanks from his old plant to a new site which he recently purchased. When complete, Mr. Mutz will have a total storage capacity of over 125,000 gallons.

Tank Wagon, Service Station Markets for Gasoline and Kerosene
in United States Territories and Canada

BELOW are given in cents a gallon, the tank wagon price of gasoline without the special taxes levied against motor fuels by many states, the amount of the state taxes, the total tank wagon price, with tax added in and the service station or retail price of gasoline as quoted by the Standard Oil Companies in their various marketing territories. The right hand column is the tank wagon price of kerosene. By tank wagon price is meant the price to resale agents or dealers.

These Prices in Effect May 25, 1925

S. O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Atlantic City, N. J.	18	0	18	*	12.5
Newark, N. J.	18	0	18	20	12.5
Annapolis, Md.	19	2	21	*	12
Baltimore, Md.	18	2	20	22	11
Cumberland, Md.	19	2	21	23	12
Washington, D. C.	18	2	20	22	12
Danville, Va.	19	3	22	*	13
Norfolk, Va.	19	3	22	24	13
Richmond, Va.	19	3	22	24	13
Roanoke, Va.	19	3	22	24	13
Petersburg Va.	19	3	22	*	13
Charleston, W. Va.	18	2	20	22	13
Clarksburg, W. Va.	19	2	21	23	13
Keyser, W. Va.	19	2	21	*	13
Parkersburg, W. Va.	18	2	20	22	13
Wheeling, W. Va.	18	2	20	22	13
Williamsburg, W. Va.	19	2	21	*	13
Charlotte, N. C.	19	4	23	25	14
Hickory, N. C.	19	4	23	*	14
High Point, N. C.	19	4	23	*	14
Mt. Airy, N. C.	19	4	23	*	14
Salisbury, N. C.	19	4	23	*	14
Charleston, S. C.	19.5	5	24.5	26.5	14.5
Columbia, S. C.	19.5	5	24.5	26.5	14.5

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

*New York City	20	0	20	22	13
Albany, N. Y.	19	0	19	21	13
Buffalo, N. Y.	21	0	21	24	13
Rochester, N. Y.	†21	0	†21	†25	13
Syracuse, N. Y.	21	0	21	23	12
Boston, Mass.	21	0	21	25	11
Augusta, Me.	21	1	22	25	13
Manchester, N. H.	21	2	23	27	13
Burlington, Vt.	21	2	23	26.5	13

*In steel barrels.
†At Rochester only, as far as is known, Standard sells two grades of gasoline, the above price applying to its Socony grade, and another grade being sold 2c below this price.

ATLANTIC REFINING

Pittsburgh, Pa.	19	0	19	*24	14
Philadelphia, Pa.	19	0	19	*24	14
Allentown, Pa.	19	0	19	*24	14
Erie, Pa.	19	0	19	*24	14
Scranton, Pa.	19	0	19	*24	14
Altoona, Pa.	19	0	19	*24	14
Dover, Del.	19	2	21	24	14
Wilmington, Del.	19	2	21	24	14
Providence, R. I.	21	0	21	25	13
Springfield, Mass.	21	0	21	25	13
Worcester, Mass.	21	0	21	25	13
Hartford, Conn.	21	1	22	26	12
New Haven, Conn.	21	1	22	26	13
Boston, Mass.	21	0	21	25	11

*Contains 2-cent tax collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	16	3	19	22	14
Louisville, Ky.	18	3	21	24	12
Covington, Ky.	17	3	20	23	14
Clarksdale, Miss.	18	3	21	24	12
Jackson, Miss.	18	3	21	24	10
Natchez, Miss.	17.5	3	20.5	23.5	11.5
Vicksburg, Miss.	17.5	3	20.5	23.5	11.5
Birmingham, Ala.	19	2	21	24	14.5
Mobile, Ala.	18	2	20	23	12.5
Montgomery, Ala*	20	2	22	25	15.5
Atlanta, Ga.	20	3	23	26	13
Augusta, Ga.	20	3	23	26	15
Macon, Ga.	20	3	23	26	14.5
Savannah, Ga.	18	3	21	24	13
Jacksonville, Fla.	18	3	21	24	13
Miami, Fla.	20	3	23	26	14.5
Tampa, Fla.	18	3	21	24	13
Pensacola, Fla.	18	3	21	24	13.5

*Local privilege tax of 1 cent of gasoline and ½ cent on kerosene at Montgomery included.

S. O. INDIANA

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Chicago, Ill.	†18	0	†18	20	12
Decatur, Ill.	18.2	0	18.2	20.2	12.5
E. St. Louis, Ill.	17.1	0	17.1	19.35	11.6
Joliet, Ill.	18.4	0	18.4	20.4	12.7
Peoria, Ill.	18.2	0	18.2	20.2	12.5
Quincy, Ill.	18.2	0	18.2	20.2	12.3
Indianapolis, Ind.	18.2	3	21.2	23.2	12.7
Evansville, Ind.	18	3	21	23	12.5
South Bend Ind.	18.4	3	21.4	23.4	12.9
Detroit, Mich.	18.8	2	20.8	22.8	13.2
Grand Rapids, Mich.	18.7	2	20.7	22.7	13.1
Saginaw, Mich.	18.9	2	20.9	22.9	13.3
Madison, Wis.	18.3	2	20.3	22.3	12.5
Milwaukee, Wis.	18.1	2	20.1	22.1	12.3
La Crosse, Wis.	19.2	2	21.2	23.2	13.4
Minneapolis, Minn.	19.2	2	21.2	23.2	13.6
Duluth, Minn.	19.5	2	21.5	23.5	13.6
Mankato, Minn.	19.1	2	21.1	23.1	13.4
Des Moines, Iowa.	18.5	2	20.5	22.5	12.9
Davenport, Iowa.	18.5	2	20.5	22.5	12.9
Sioux City, Iowa.	18	2	20	22	12.5
Mason City, Ia.	18.5	2	20.5	22.5	12.9
St. Louis, Mo.	**17.6	2	19.6	21.9	12
Kansas City, Mo.	††18.9	2	20.9	22.9	11.8
St. Joseph, Mo.	**18	2	20	22	11.9
Fargo, N. D.	19.9	1	20.9	22.9	15.6
Grand Forks, N. D.	20.1	1	21.1	23.1	15.9
Minot, N. D.	20.9	1	21.9	23.9	15.6
Pierre, S. D.	20	3	23	*	14.1
Huron, S. D.	15	3	18	20	14.1
Wichita, Kans.	17.8	2	19.8	21.8	11.8
Bartlesville, Okla.	16.9	3	19.9	21.9	10.9

†Dumps of 100 or more gallons at 17c per gallon.
*S. O. Indiana does not operate station.
**Includes city tax of ½c.
††Includes city tax of 1c.

S. O. NEBRASKA

Crawford, Neb.	19	2	21	*	13.25
Omaha, Neb.	16	2	18	20	12.5
McCook	19.75	2	21.75	23.75	14
Norfolk	18.75	2	20.75	22.75	13
North Platte	19.75	2	21.75	23.75	13.75
Scotts Bluff	19 25	2	21.25	23.25	13.25

*Standard has no service station here.

CONTINENTAL OIL

Denver, Colo.	19	2	21	23	14.5
Pueblo, Colo.	19	2	21	23	14.5
Casper, Wyo.	19	2½	21.5	23.5	13
Cheyenne, Wyo.	20.5	2½	23	25	14.5
Butte, Mont.	21	2	23	23	16
Helena, Mont.	23	2	25	27	17
Salt Lake City, Utah.	20.5	3½	24	26	18
Boise, Ida.	21.5	3	24.5	26.5	20
Albuquerque, N. M.	23.5	3	26.5	29.5	16.5

S. O. CALIFORNIA

Phoenix, Ariz.	20	3	23	26	21.5
Los Angeles, Cal.	13.5	2	15.5	18.5	15.5
Fresno, Cal.	15.5	2	17.5	20.5	17.5
San Francisco, Cal.	15	2	17	20	15.5
Reno, Nev.	18.5	4	22.5	25.5	19
Portland, Ore.	15	3	18	21	16.5
Seattle, Wash.	15	2	17	20	16.5
Spokane, Wash.	19	2	21	24	20.5
Tacoma, Wash.	15	2	17	20	16.5

S. O. LOUISIANA

Camden, Ark.	18	4	22	24	12
Little Rock, Ark.	18	4	22	24	10
West Helena, Ark.	18	4	22	24	11
Alexandria, La.	17.5	2	19.5	21.5	12
Baton Rouge, La.	16	2	18	20	10.5
Lake Charles, La.	17.5	2	19.5	21.5	12
New Orleans, La.	*17.5	2	19.5	21.5	*11
Shreveport, La.	17.5	2	19.5	21.5	11
Lafayette, La.	17	2	19	21	11.5
Bristol, Tenn.	19	3	22	24	12.5
Chattanooga, Tenn.	18.5	3	21.5	23.5	13.5
Knoxville, Tenn.	19.5	3	22.5	24.5	14
Nashville, Tenn.	18.5	3	21.5	23.5	12.5
Memphis, Tenn.	17	3	20	22	13

*Includes 1c city tax on gasoline and kerosene.

S. O. OHIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
All Ohio points	*18.5	2	20.5	22.5	15

*This price is on the assumption the Ohio distributor pays the 2c gasoline tax.

MAGNOLIA PETROLEUM

Muskogee, Okla.	16.5	3	19.5	22.5	11
Oklahoma City	16.5	3	19.5	22.5	12
Tulsa, Okla.	15.5	3	18.5	21.5	11
Fort Smith, Ark.	18	4	22	25	12
Little Rock, Ark.	18	4	22	24	10
Texarkana, Ark.	18	4	22	25	12
Dallas, Tex.	17	1	18	22	12
El Paso, Tex.	18	1	19	22	13
Fort Worth, Tex.	17	1	18	22	12
Houston, Tex.	17	1	18	22	12
San Antonio, Tex.	14	1	15	18	12

*Within city of Texarkana, Ark., the state tax on gasoline is 1c per gal. conforming with the Texas state tax. In Texarkana district outside of the city, the 4c state tax applies.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline)

	V.M.&P. Naphtha	Oleum Spirits
Chicago	21	19
Detroit	22.7	20.2
Milwaukee	21.7	19.2
Minneapolis	23	20.5
St. Louis	20.9	18.4
New York	20.5	....
Cleveland	19	....

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

Prices in effect May 25, 1925

ONTARIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Toronto	23.5	3	26.5	30	20
Ottawa	24.5	3	27.5	31	21
Cochrane	28.5	3	31.5	35	24.5
Ft. William	26.5	3	29.5	33	22.5
MANITOBA					
Winnipeg	26.5	3	29.5	33	22.5
SASKATCHEWAN					
Regina	29.5	0	29.5	33	25.5
ALBERTA					
Edmonton	31.5	2	33.5	37	27.5
Calgary	30.5	2	32.5	36	26.5
BRITISH COLUMBIA					
Vancouver	21	3	24	28	23
QUEBEC					
Montreal	23.5	3	26.5	30	20
Quebec City	25.5	3	28.5	32	22
NEW BRUNSWICK					
St. John	26.5	0	26.5	31	20
Moncton	26.5	0	26.5	31	22
NOVA SCOTIA					
Halifax	26.5	0	26.5	31	23
Sydney	28.5	0	28.5	33	25
PRINCE EDWARD ISLAND					
Charlottetown	26.5	2	28.5	33	28

Note: In districts surrounding these points 1c additional is added to city price.

Complete Export Markets

New York **Gulf Coast** **California**

Increase in Gasoline Prices Fails To Stimulate Export Buying

By Special Correspondent

NEW YORK, May 25

STANDARD OIL CO., of New Jersey on May 21 advanced all grades of export gasoline ½ cent a gallon, and at the same time cut kerosene export prices ½ cent a gallon. However, export buyers are not responding to the advances in gasoline. Many of them feel that prices are being forced and consequently are holding off.

The fact that a Philadelphia Independent sold a mixed cargo for June clearance from Houston, Texas to France at 12⅜ cents for U. S. Motor, 14 cents for export naphtha, 15 cents for prime white, and 6 cents for water white kerosene, several days after Gulf prices had been advanced, tended to discourage foreign buyers from entering the market for summer requirements. It is understood that this sale, which called for 45,000 barrels, will be filled by a large Gulf refiner.

A French buyer was inquiring for a mixed cargo of 50,000 barrels of prime and water white kerosene and U. S. Motor and 64 gravity gasoline, for June-July shipment from New York but was bidding ½ cent a gallon below refiner's ideas on gasoline and ¼ cent below kerosene prices. A United Kingdom buyer was inquiring for a cargo of 64 and U. S. Motor gasoline for June shipment, but this failed to materialize.

The fact that the Gulf Refining Co. reduced its tank wagon price for gasoline 2 cents a gallon, bringing it in line with The Texas Co.'s 18-cent price, has also tended to check foreign buying. Cased gasoline remained quiet and no purchases worth mentioning developed. South American and Japanese buyers appeared well covered for the present. There is a good consignment shipment to the Near East.

Kerosene export demand has been very disappointing. The reduction of ½ cent a gallon in export prices has failed to stimulate foreign buying and the movement was mainly against standing contracts. There has been a slightly better domestic demand but stocks are heavy, prices are weak and export buyers are holding off for further declines. The leading refiners are quoting water white at 7 cents a gallon at New York harbor refineries, but 6¾ cents could easily have been done in several directions on a firm bid.

Gas Oil Price Declines

Gas oil declined ¼ cent a gallon. Domestic demand is less active while there was virtually no export buying reported For 36-40 in bulk at New York harbor refineries the asking price is now 5½ cents a gallon while 28-34 is held at 5¼ cents a gallon. Stocks are larger regardless of the fact that considerable gas oil is now being cracked for gasoline. European consumers find that they can still lay down Polish gas oil at destination much cheaper than they can American oil.

Lubricating oils were stronger as a result of the advance in Pennsylvania crude oil and demand from the other side was better. A large French buyer purchased 1,000 barrels of Pennsylvania 600 steam refined at around 27 to 27½ cents a gallon, New York. A German buyer was inquring for a mixed cargo of lubricants but this failed to develop. Spindle oils were firmer but quiet.

Bunker Oil Demand Lags

Demand for bunker oil has been lagging for some time and no sizable purchases were disclosed. Leading refiners are quoting grade C at $1.75 a barrel, at local refineries. Diesel oil was dull at $2.30 a barrel, refinery. Stocks are larger.

Demand for the paraffin waxes was less active last week. Most of the large export buyers were buying in a hand-to mouth way, while the big sellers are not inclined to make concessions and are fairly firm in their ideas. Considerable wax is being cleared against standing contracts, and stocks on spot are not very large. White crude scale is moving into domestic consuming channels in a light, routine way.

Petrolatums were quiet but fairly steady. Lily white is in better demand while the call for snow white has improved a little. Stocks on hand are moderate. Medicinal oils are dull.

N. O. Buying Light; Exporters Optomistic

NEW ORLEANS, May 25.—Sentiment among New Orleans exporters was more optimistic but little new buying developed last week. The advance of ½ cent a gallon in the New York gasoline export prices stimulated interest in this market but regardless of the fact that prices remained unchanged, foreign buyers were skeptical about doing business at prevailing prices. Many agents with foreign connections feel that prices have been advanced too rapidly and will be due for a reaction within the next few weeks.

A United Kingdom buyer was negotiating with a leading refiner for a mixed cargo of gasoline and kerosene, 50,000 barrels, to be shipped early in June, but there was a variance of about ½ cent a gallon in their ideas and this deal fell through. Most of the big refiners were asking 13 cents for U. S. Motor; 16 cents for 64-66 gravity; 5¼ cents for prime white, and 6¼ cents for water although rumor had it that the kerosene might have been shaded ¼ cent in one direction.

A Spanish buyer was inquiring for a cargo of 30,000 barrels of U. S. Motor and 64 gravity gasoline, and one of the smaller Independents is still working on this. A German buyer was inquiring for a mixed cargo, 42,000 barrels, of prime and water kerosene and U. S. Motor and 64 gravity for June-July shipment but this is still hanging fire.

(Continued on page 122)

Pacific Export Market

(Cargo lots quotations at seaboard, Los Angeles.)

	May 25	May 18
Gasoline, U. S. Motor—54°—56°	10½–11½	10½–11½
Gasoline—U. S. Motor blends and special cuts.	11¼–12½	11 –12½
Gas Oil, 24°—30°B per bbl.	$1.75	$1.75
Diesel Oil, 27°B-plus per bbl.	$1.75	$1.75
Bunker Oil,14°—18°B per bbl.	$1.55	$1.55
Fuel Oil,14°—18°B per bbl.	$1.55	$1.55
Kerosene, W.W.40°—42° B per gal.,125-150 flash test	05 –06½	05 –06½
Cased Goods		
Gasoline, U. S. Motor	$2.70	$2.70
Kerosene, W.W.40°—42° B per case, flash test 125-150	$1.55–1.65	$1.55–1.65

N. Y. Domestic Market

The following light oil, gas and fuel oil prices are F. O. B. New York refineries, being products made from Domestic (including California) and Mexican Crudes.

	May 25	May 18
U. S. Motor Gasoline, Tank Cars Delivered	–14½	–14½
U. S. Motor Gasoline, Tank Cars Bayonne	–13½	–13½
Kerosene, 45-150 W. W. Tank, Cars Del'd	–.08	–.08
Grade C Bunker,f.o.b.N.Y.	1.75	1.75
Diesel Oil f.o.b.Refinery	2.30	2.30
Gas Oil,36-40,Bulk,Refinery	–05½	–05¼
Gas Oil, 28-34	–05¼	–05⅛

New York Export Market

Prices below are averages of actual sales by local exporting Agencies

	May 25	May 18
GASOLINE		
U. S. Motor, Bulk, Ref.	-13⅝	13¼-13⅜
KEROSENE		
43-150 W. W. Bulk Ref.	-06¾	-06¾
GAS OIL		
34-40, Bulk Ref.	-05⅜	-05¾
32-34, Bulk Ref.	-05¼	-05⅜
BUNKER OIL		
Grade C, Ref.	1.75	-1.75
Diesel Oil Ref.	2.30	-2.30
LUBRICATING OILS		

The following prices are cooperage basis f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS BBLS.				
Penna. Filtered D 600		-36		-36
Penna. Filtered E 600		-34½		-34
Unfiltered 600 s. r.		-26½		-26½
Unfiltered 650 s. r.		-32		-32
600 flash s. r.	38	-39	38	-39
Western 600 s. r.	15	-17	15	-17
Bloomless 30-31 grav.		-25		-25
RED PARAFFIN (bbls.)				
900 vis. at 100°F.	24	-25	24	-25
850 vis. at 100°F.		-23		-23
175 vis. at 100°F.		-22½		-22½
High Viscosity Paraffin		-33		-33
.885 s. g. pale 100 vis. at 100°F	15	-16	15	-16
SPINDLE (bbls.)				
900 vis. at 100°F. Pale		-29		-29
180 Pale		-27		-27
150 Pale		-25		-25
BLACK OIL (bbls.)				
25-30 cold test	14	-15	13½	-14½
15 cold test	15	-15½	15	-15½

	May 25	May 18
MEDICINAL OILS		
(Cooperage Basis)		
(Penna. Stocks)		
Domestic.875-.885s.g.drums	1.00-1.08	1.00-1.08
Domestic.865-.870s.g.drums	75 -80	75- 80
Russian.885-.890s.g.325-330 vis. drums	1.20-1.25	1.20-1.25
WAXES		
(Penna. Stocks)		
(F. A. S. Carload Lots)		
WHITE CRUDE SCALE		
122-124 A. m. p.	05¾-05¾	-05 -05¾
124-126 A. m. p.	05¾-05¾	-05¾-05¾
MATCH		
105-108 A. m. p.	05¾-06	-05¾ -06
111-115 A. m. p.	nominal	nominal
FULLY REFINED		
120-122 A. m. p.	05¾ -05¾	-05¾-05¾
123-125 A. m. p.	-06	-06
125-127 A. m. p.	-06¾	-06¾
128-130 A. m. p.	-06¾	-06¾
130-132 A. m. p.	-06¾	-06¾
133-135 A. m. p.	-07¼	-07¼
SEMI REFINED		
122-124 A. m. p.	-05¼	-05¾
YELLOW CRUDE SCALE		
124-126 A. m. p.	-05	-04¾
PETROLATUMS		
(Penna. Stocks)		
Dark Green	02⅜	02⅜
Veterinary	03¾	03¾
Light Amber	03⅞	03⅞
Dark Amber	03½	03½
Cream	07¾	07¾
Lily White	10¾	10¾
Snow White	12½	12½

N. Y. Export Quotations

Furnished by big exporting oil companies. No actual sales. Record for statistical purposes only.

Illuminating Oils
Standard Oil of New Jersey

	May 25	May 18
Bulk, gal., Bayonne	6.00	6.50
Barrels, gal., Bayonne, cargo	13.00	13.50
Cases, gal., Bayonne	16.50	16.90

Prices for water white oil (150 test) are 1 cent higher than those for standard white.

Gasoline-Naphtha
(Cents per Gallon)

U. S. Motor, dead bulk	16.00 15.50
U. S. Motor, cases	30.15 29.65
Export Naphtha bulk	18.75 18.25
*62-63 deg. bulk	20.00 19.50
63-63 deg. bulk	21.50 21.00

*Grade changed from 64-66 to 62-63 Jan. 9.

Tide Water Oil Company
(f. o. b. Bayonne)

58-59 deg. bulk	17.00 16.50
58-59 deg. cases	30.65 30.15
Export grade, U. S. Motor Specifications bulk	16.00 15.50
63-72 deg. bulk	22.50 22.00

	Bulk	Barrels	Cases
Standard white 110	6.00	13.00	16.00
Water white 150	7.00	14.00	17.00

The Texas Company

Gasoline, cases	30.15 29.65

Kerosene	Bulk	Barrels	Cases
Standard White	6.00	13.00	16.40
Prime White	6.50	13.50	16.90
Water White	7.00	14.00	17.40

Gulf Export Market

(Actual Sales Prices)
Gasoline

	May 25	May 18
U. S. Motor, Bulk	-.13	-.13
60-62 gr. 400 e. p.	-.14½	-.14½
64-66, Bulk	-.16 16	-.16½
U. S. Motor, Cases (cargo lots)	2.60	2.65
64-66. Cases (cargo lots).	2.80	2.90
KEROSENE		
Water White, bulk	-.06¼	-.06¼
Prime White, bulk	-.05¼	-.05¼
Water White, cases (cargo lots)	1.70	1.70
Prime White, cases (cargo lots)	1.60	1.60
GAS AND BUNKER OIL		
26-28, gravity, bulk	-05¼	-05¼
32 plus, bulk. Dark	-05	-05
Grade C, Bunker oil	-1.50	-1.55
MEXICAN CRUDE AND BUNKER OILS		
Heavy, f.o.b.Tampico, Taxes to be added	nominal	nominal
Mexican Grade C,Bunker oil F. O. B. Tampico Taxes paid	1.50	1.50
Mexican C, Bunker oil New Orleans	1.50	1.50

Lubricating Oils

SOUTH TEXAS
(Viscosity at 100°F; cold test 0)
(Tanker, F. O. B. Houston)

	May 25	May 18
100 Vis. No. 2 Filtered Pale	8½	8½
150 Vis. No. 2½ Filtered Pale	10½	10½
200 Vis. No. 3 Filtered Pale	12	12
300 Vis. No. 5 Filtered Pale	14	15
500 Vis. No. 5½ Filtered Pale	17	17
200 Vis. No. 5½ Red Oil	11¼	11¼
300 Vis. No. 5½ Red Oil	13	13
500 Vis. No. 6 Red Oil	15	15
750 Vis. No. 6 Red Oil	20	20

EXPORTERS

of

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PRODUCTS
FROM
GULF PORTS

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GAS OIL
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(Continued from page 120)

Cased gasoline ruled dull. A Japanese buyer was inquiring for 20,000 cases for May-June, shipment. While one of the smaller Independents expects to close this, no other inquiries or sales of consequence developed. Demand from South America is disappointing. One large Independent sold two lots of 10,000 cases each for June shipment presumably to Brazil.

Kerosene was weak. Demand has been disappointing for several weeks and stocks are piling up with refiners more inclined to press sales. Prime white was quoted at 5¼ cents and water at 6¼ cents but the indications were that these prices might have been shaded a trifle on a firm bid. A German buyer was inquiring for a cargo of prime and water white kerosene but this was chiefly in the nature of a feeler and failed to materialize. Cased kerosene was dull. Prime was quoted at $1.60 and water at $1.70 a case.

Gas oil demand was disappointing, but as there is quite a little being cracked for gasoline, holders were not inclined to make concessions and 26-28 transparent was well held at 5¼ cents with one factor asking 5½ cents. For 32 plus dark offerings were large at 5 cents. It is still possible for Europeans to lay Galician gas oil down at lower prices and they are not showing much interest in American oil.

Bunker Oil Steady

Bunker oil was steady at $1.50 a barrel, New Orleans. The advance in heavy Smackover crude has improved the position of this market a little, but the movement is still mainly on contract. Export demand was spasmodic, and no cargo sales were disclosed. At Tampico Grade C was also quoted at $1.50 a barrel, including taxes, while heavy Panuco crude oil was entirely nominal.

Lubricants were sluggish. No bulk sales were reported and the tendency was easier although no substantial readjustments were announced. There is a fairly good movement against contracts which is preventing stocks from piling up. A French buyer was inquiring for 20,000 barrels of assorted lubricants, but this is still pending.

The waxes were in better export demand. Three orders were booked by an Independent. These called for 25 tons each of white crude scale. The prices were steady. Fully refined wax demand is slightly better but as a rule European buyers are taking about a third of what they were buying six weeks ago. Match waxes were quiet. Semi refined ruled dull.

Medicinal oils did not show any life. Export demand was mainly hand-to-mouth. The petrolatums are holding up fairly well. Snow white is in better demand, with United Kingdom buyers more inclined to anticipate. Lily white is quiet and unchanged.

Crude Oil Prices All Fields

EASTERN FIELDS

	1925 May 25	1924 High	1924 Low	1923 High	1923 Low
Bradford-Allegany	$3.65	Jan.30..$4.50	Aug.21..$2.85	Feb.15..$4.25	Nov.13..$2.00
Gaines	3.30	Jan.30.. 4.00	Aug.5... 2.75	Feb.15.. 4.00	Nov.13.. 2.30
Other Penna	3.55				
West Virginia	3.50				
Penna. grade in Ohio	3.40				
Cabell	2.20	Mar.10.. 2.20	Jan.1and Aug.5. 1.45	Feb.15.. 2.76	Nov.13.. 1.80
Corning	1.95	Mar.10.. 2.15	Jan.1... 1.40	Feb.15.. 2.30	Nov.14.. 1.40
Somerset	2.30	Mar.10.. 2.30	Jan.1... 1.40	Feb.15.. 2.55	Nov.13.. 1.10
Somerset Light	2.45	Mar.10.. 2.50	Jan.1... 1.55	Feb.15.. 2.80	Nov.13.. 1.80
Ragland	1.30	Mar.10.. 1.10	Jan.1... .85	Feb.15.. 1.10	July 10.. .70

Somerset oil run prior to Oct. 1, 1925, takes price of 6 cents lower than above quotations.

CENTRAL STATES FIELDS

Wooster	$2.15	Mar.8...$2.15	Jan.1,and Sept.18 $1.40	Feb.19..$2.50	Nov.9...$1.80
Lima	2.23	Mar.8... 2.28	Jan.1... 1.55	Feb.19.. 2.58	Nov.9... 1.40
Indiana	2.03	Mar.8... 2.08	Jan.1... 1.55	Feb.19.. 2.38	Nov.9... 1.23
Princeton	2.02	Mar.8... 2.07	Jan.1... 1.52	Feb.19.. 2.37	Nov.8... 1.22
Illinois	2.02	Mar.8... 2.07	Jan.1... 1.52	Feb.19.. 2.37	Nov.8... 1.22
Plymouth	1.55	Mar.8... 1.45	Jan.1... .70	Feb.19.. 1.75	Nov.9... .60
Canadian Petrolia	2.63	Mar.8... 2.68	Jan.1... 1.93	Feb.19.. 2.93	Nov.9... 1.80

MID-CONTINENT AND NORTH TEXAS FIELDS

Below 30	$1.55	Currie	$2.00
30-32.9	1.55	Mexia	2.00
33-35.9	1.80	Powell	2.00
36-38.9	2.00		
39-41.9	2.25		
42 and above	2.35		

Humble's Prices
Moran Field Texas

Below 30	$1.35	36 and above	$2.00
30-32.9	1.55	Wortham	2.00
33-35.9	1.80	Richland	2.00

Magnolia's Price Schedule
North and North-Central Texas, Okla., and Kan.

Below 28	$1.00	Corsicana, light, Powell, Mexia	$2.00
28-30.9	1.35	Corsicana, heavy	1.00
31-32.9	1.55	Thrall	1.00
33-35.9	1.80	*Magnolia pays $2 and $2.25 respectively for these two grades in Okla. and Kan.	
*36-38.9	1.95		
*39-41.9	2.10		
42 and above	2.35		

NORTH LOUISIANA—ARKANSAS FIELDS

Caddo, 38 degrees and above	$2.05	do 32 to 34.9	1.55
do 35 to 37.9	1.95	De Soto	1.90
do 32 to 34.9	1.85	Crichton	1.70
do below 32	1.70	Bellevue	1.70
Homer, 35 and above	1.80	Smackover 27 and above	1.90
do 33 to 34.9	1.70	do 26-26.9	1.85
do 31 to 32.9	1.60	do 25-25.9	1.90
do below 31	1.45	do 24–24.9	1.10
Haynesville, 33 and above	1.70	do below 24	.80
do below 33	1.60	Stephens 26 and above	1.45
El Dorado 33 and above	1.70	do below 26	1.25
do below 33	1.60	Cotton Valley	1.00
Bull Bayou, 38 and above	1.85		
do 35 to 37.9	1.70		

GULF COASTAL FIELDS

	1925 May 25	1924 High	1924 Low	1923 High	1923 Low
Spindletop	$1.75	Apr.1...$2.00	Jan.1 and Sept.17.....$1.25	Mar.15..$1.75	Aug.18..$1.00
Goose Creek "A"	1.75	Apr.1...$2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Goose Creek "B"	1.50	Apr.1... 1.70	Sept.17..... 1.05	Mar.15.. 1.50	Aug.18.. 1.00
Sour Lake	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Humble	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Hull "A"	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Hull "B"	1.50	Apr.1... 1.70	Jan.1 and Sept.17..... 1.00	Mar.15.. 1.30	Jan.1... .80
West Columbia	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Edgerly	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Vinton	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Jennings	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Saratoga	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25	Mar.15.. 1.75	Aug.18.. 1.00
Orange "A"	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25		
Orange "B"	1.50	Apr.1... 1.70	Jan.1 and Sept.17..... 1.00		
Pierce Junction "A"	1.75	Apr.1... 2.00	Jan.1 and Sept.17..... 1.25		
Pierce Junction "B"	1.50	Apr.1... 1.70	Jan.1 and Sept.17..... 1.00		

WYOMING FIELDS

Elk Basin	$2.15	Mar.10..$1.65	Jan.1...$ .95	Feb.17..$2.10	Nov.9...$ .95
Grass Creek	2.15	Mar.10.. 1.95	Jan.1... .95	Feb.17.. 2.10	Nov.9... .95
Big Muddy	2.00	Mar.10.. 1.50	Jan. 1... .45	Feb.17.. 1.65	Nov.9... .45
Salt Creek	1.60	Mar.10.. 1.60	Jan.1... .60	Feb.17.. 1.65	Nov.9... .60
Lance Creek	2.15	Mar.10.. 1.90	Jan.1... .90	Feb.17.. 2.10	Nov.9... .90
Rock Creek	2.00	Mar.10.. 1.70	Jan.1... .60	Feb.17.. 1.75	Nov.9... .60
Osage	2.15	Mar.10.. 1.90	Jan.1... .90	Feb.17.. 2.10	Nov.9... .90
Cat Creek, Mont	2.15	Mar.10.. 1.95	Jan.1... .95	Feb.17.. 2.10	Nov.9... .95
Sunburst, Mont	1.20	Mar.10.. 1.05	Jan.1.... 70	Feb.17.. 1.50	June 6.. .70

CALIFORNIA

14-19.9	$1.25	25-25.9	$1.44	30-30.9	$1.64
20-20.9	1.27	26-26.9	1.48	31-31.9	1.68
21-21.9	1.30	27-27.9	1.52	32-32.9	1.72
22-22.9	1.33	28-28.9	1.56	33-33.9	1.76
23-23.9	1.36	29-29.9	1.60	34-34.9	1.80
24-24.9	1.40			35 and above	1.80

ROSECRANS FIELD

36-36.9	$1.80
and for each increase of one full degree above 36° gravity, up to and including 41.9° gravity, 8 cents per barrel additional	
8 and above	$2.40

Sunshine and Holiday Coming this week

CHICAGO, May 24.—Excepting for a few showers early this week, fair weather will prevail throughout all of the Chicago forecast district until the "May Page" has been torn off the calendar. The showers mentioned will be short, light and well scattered, according to information issued from the local weather office last Saturday afternoon.

Probably the best news of all to the oil industry is the prediction that the latter half of the week will be warm. Fair cool weather will prevail early this week, but as Memorial Day approaches the thermometer may be expected to rise. Memorial day is on Saturday, which augurs well for the consumption of gasoline.

Last week a wet spell was forecast. This never came. Few weeks bring more hours or more acres of sunshine to the United States than last week. There were showers in Florida and Oregon and a few other spots, some of them rather hard showers, but they were of limited area and short duration.

Cargoes Clearing From N.Y.

Date	Destination	Product	Quantity
May 11	Hamburg	Lubes	2,092,369 gals.
May 2	Ceara, Brazil	Ref. Pet.	5,000 cases
May 2	Para, Brazil	Ref. Pet.	7,300 cases
May 2	Para, Brazil	Gasoline	2,000 cases
May 2	Natal, Brazil	Ref. Pet.	5,000 cases
May 2	Natal, Brazil	Gasoline	2,000 cases
May 2	Cabadello	Gasoline	5,000 cases
May 2	Pernambuco	Ref. Pet.	5,000 cases
May 2	Pernambuco	Gasoline	1,100 cases
May 8	La Guayra, S.A.	Gasoline	2,000 cases
May 8	Porto Cabello	Gasoline	2,000 cases
May 7	Rotterdam	Gas Oil	286,893 gals
May 7	Rotterdam	Ref. Pet.	1,471,435 gals
May 7	Rotterdam	Export Nap	1,307,933gals.

British Importations

During the week ended May 4, 31,689,567 Imperial gallons of petroleum were imported into the United Kingdom. Larger receipts included:

Consignee	Imperial Gallons	Product	Port of Origin
At London—			
Anglo-Mex	1,888,000	Fuel Oil	Tampico
Anglo-Mex	2,006,000	Fuel Oil	Tuxpan
Shell	3,815,614	Crude	Curacao
Brit-Mex	2,045,160	Fuel Oil	Tampico
Anglo-Amer	1,475,240	Gas Oil	Pt a Pierre
Anglo-Amer	2,637,960	Kerosene	New York
Anglo-Amer	1,794,260	Kerosene	New York
Anglo-Amer	163,918	Kerosene	New York
Anglo-Amer	171,872	Lubes	New York
Anglo-Amer	1,077,790	Naphtha	Kustendje
At Liverpool—			
Brit-Mex	1,888,000	Fuel Oil	Texas City
At Barrow—			
United Caucasian	198,000	Benzine	Beaumont
At Bristol—			
Shell	987,725	Benzine	Abadan
At Hull—			
Spear, Houfe	151,787	Kerosene	Constanza
At Manchester—			
Anglo-Amer	2,132,680	Gasoline	P. Arthur
Anglo-Amer	1,084,253	Lubes	New York
Shell	1,241,421	Benzine	Abadan
At North Shields—			
Anglo-Mex	967,600	Fuel Oil	Tuxpan
At Southampton—			
Shell	210,082	Gas Oil	P. Arthur
At Swansea—			
National Oil Ref.	2,533,123	Crude	Abadan
National Oil Ref.	2,591,965	Crude	Abadan

Refiners', Compounders' Supplies

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	May 25	May 18
Soda Ash light 58% bags cwt.	-$1.38	-$1.38
Silicate of Soda 60 deg. drums.....cwt.	- 1.70	- 1.70
Sal Soda wks.....cwt.	1.10- 1.25	1.10- 1.25
Caustic Soda 76% solid.cwt.	- 3.10	- 3.10
Chloride of Lime.....cwt. works	1.80- 1.90	1.80- 1.90
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	9.50-11.00	9.50-11.00

Compounders' Supplies (Open Market)

Vegetable Oils—		
Linseed carloads spot...gal.	- 1.06	- 1.06
May-August	- 1.06	- 1.06
Tanks, spot	- 1.00	- 1.00
Less carload spot.....gal.	- 1.09	- 1.06
Less than 5 bbls. spot.....	- 1.11	- 1.11
Boiled tank spot	- 1.08	- 1.08
Boiled, carloads spot....gal.	- 1.09	- 1.09
*Soya Bean spot, Bbls...lb.	- .13	- .13
Animal Oils—		
English Degras.....lb.	-.05	-.05
Domestic Degras, bbls., carloads.....lb.	-.04½	-.04½
*Horse.....lb.	-.09½	-.09½
Oleic Acid—		
Dist Bbls.....lb.	-.11¾	-.11¾
Saponified, Bbls.....lb.	-.11¼	-.11¼
Lard Oils—		
Prime Winter Strained.. 1 to 1½ ffa. 40‡45c.t.lb.	.18¾	.18½
Extra Winter Strained.. 2 to 4½ ffa. 40/45c.t.lb.	.18¼	.17¾
Extra..... 4 to 5 ffa. 40/45c.t.lb.	.14¾	.14¾
Extra No. 1. 7 to 10 ffa. 40/50c.t.lb.	.12¾	.12¾
No. 1.....15 to 18 ffa. 40/45c.t.lb.	.12½	.12½
No. 2.....22 to 25 ffa. 40/45c.t.lb.	.12¼	.12½
Prime Edible Tallow under 1½ ffa. 40/45c.t.N. Y.....lb.	-.10½	-.10½
Tallow acidless.....lb.	-.12¾	-.12¾
Lard Stearine.....lb.	-.10½	-.10½
Oleo Stearine.....lb.	-.11½	-.11½
Neatsfoot Oil—		
Pure.....bbls.-lb.	.14½	.14½
Extra.....do lb.	.12¾	.12¾
No. 1.....do lb.	.12½	.12½
Cold pressed.....lb.	.17½	.17½
Fish Oils—		
Menhaden Oil Light pressed.....gal	-.78	-.78
White.....gal.	-.85	-.85
Yellow bleached.....gal.	-.81	-.81
*Herring tank cars coast.....gal.	-.40	-.40
Whale, extra winter bleached.....gal.	-.84	-.84
Seal.....gal.		Nominal
Naval Stores—		
Turpentine, N. Y.....gal.	1.07	1.08
Turpentine†.....gal.	.99	1.02
Rosin, B. N. Y.....Bbl.	9.75	9.00
Rosin F. N. Y.....Bbl.	11.25	10.50
Rosin B†.....Bbl.	8.25	7.50
Rosin F†.....Bbl.	9.75	9.00
Rosin Oil 1st run.....gal.	.60	.52
Rosin Oil 2nd run.....gal.	.63	.56
Pine Tar—		
Kiln Burnt.....Bbl.	14.00	14.00
Retort.....Bbl.	14.00	14.00

†Savannah, Ga. market.
*Nominal.

Caustic Soda is Easier; Sulfuric Acid Firm

NEW YORK, May 25.—Following is a review of the markets for oils and supplies used in compounding and refining.

Linseed oils—Prices steady. Business routine. Buyers holding off for lower prices. Movement chiefly against contracts. Stocks slightly larger. Paint makers holding off. Soya bean oil flat.

Animals oils—Steady. Price showed little or no change. Business was lighter than the previous week. Export demand for lard oil lagging. More interest in domestic degras. Pure neatsfoot in better request. Horse oil quiet. Oleic acid steady; unchanged. Acidless tallow oil demand better.

Fish oil—Quiet. No price fluctuations. Virtually no crude menhaden available. Light pressed in better demand 78 to 81 cents, cooperage basis. Yellow bleached quiet at 81 to 83 cents. Whale oil dull. Steady.

Caustic soda—Demand spasmodic. Tendency easier. Reports of shading, but no actual reductions announced. Buyers holding off and movement mainly against contract.

Soda ash—Export inquiry slightly better but domestic demand lags. Prices easier but unchanged. Stocks accumulating steadily.

Sulphuric acid—Demand more active and price holds firm. More interest in future deliveries. Stocks moderate. Producers offering sparingly.

Bleaching powder—Dull. Easy. Demand hand-to-mouth. Buyers to buy with hot weather coming on. Stocks steadily gaining.

Naval stores—Firm. Turpentine steady. Receipts in south larger and no sharp advances reported. Spot price $1.10 a gallon. Export and domestic demand more active. Rosins moving freely, but small supplies of some grades hamper business. Rosin oils in good demand. Tar and pitch steady. Quiet.

Gulf Coastal Lubes Steady

HOUSTON, May 25.—Gulf Coastal lubricant markets were on a balancing point during the last week. Prices were unchanged. One of the larger integrated companies which sells some lubricants to jobbers, has curtailed its manufacture and it appears that buyers will have to depend on smaller plants for their requirements in the immediate future. Although plenty of material is available elsewhere manufacturers say stocks are not burdensome and the prices in the last few days seemed firmer than a week ago.

Continues Pennsylvania Tax

HARRISBURG, PA., May 22.—Governor Pinchot has signed the bill continuing the 1-cent emergency gasoline law in Pennsylvania until June 1, 1927. The total gasoline tax is 2 cents per gallon.

OIL STOCKS AND FINANCES

Cosden Earns Small Net on Common; Increases Working Capital

NEW YORK, May 23.—Mid-Continent Petroleum Co., formerly Cosden & Co., reports net income of $1,424,965 for 1924, after all charges, which after dividends on preferred stock is at the rate of 69 cents a share on the common stock. In 1923 the company suffered a net loss of $3,783,624 and a deficit of $6,714,600 after dividends on preferred and common stock.

In the first quarter of this year the company reports operating income of $3,694,890 after interest and abandoned well expense but before depreciation and depletion, compared with $3,942,875 in the first quarter of 1924.

The balance sheet of Dec. 31 after giving effect to $12,500,000 bonds issued in March, 1925 shows current assets of $14,166,542 and current liabilities of $2,691,201, leaving net working capital of $11,475,341. The balance sheet as of March 31 shows current assets of $17,215,793 and current liabilities of $2,866,739, leaving working capital of $14,349,054. The crude and refined oil inventory on March 31 was carried at $7,987,593 and materials and supplies at $2,034,025, a total of $10,021,618, compared with a total of $7,526,269 on Dec. 31.

Oil Dividends

	Amt.	Payable	Stock of Record
Cities Service m	½%	July 1	June 15
do	½%*	July 1	June 15
do pfd. and pref. B m.	½%	July 1	June 15
Illinois P. L. s. a	$6	June 30	May 28
Nat'l Transit q	50c	June 15	May 29
Solar Refining s. a	$5	June 20	May 29

Fill Houston Board Vacancies

NEW YORK, May 8.—Three vacancies on the board of 23 directors of the Houston Oil Co. have been filled. New directors are: B. A. Thompson, vice-president, Bankers Trust Co., New York; Alanson G. Brown, president, Hamilton-Brown Shoe Co., and David Hannah, Houston. Houston company earned $584,802 in first quarter of 1925 compared with $1,036,312 in first quarter of 1924, both before depreciation and depletion.

Cleveland Stock Market

	Par	May 22 Bid	Asked	Last Sale
Canfield Oil Co.	$100	111	.....	115
do pfd	100	.....	100	96
Fred G. Clark Co.	10	1	3¾	4⅛
National Refin. Co.	25	38¼	40	38¾
do pfd	100	.....	.....	.....
Paragon Refin. Co.	25	8¾	8¼	8½
do pfd	100	.....	.....	67

Warner-Quinlan Sell $1,500,000 Bonds

NEW YORK, May 23.—Warner-Quinlan Co. has sold at par $1,500,000 of first mortgage 7 per cent sinking fund convertible gold bonds dated May 1, 1925, and due May 1, 1935. The bonds will be convertible into common stock at the rate of 40 shares of stock for each $1,000 bond. Following this issue, the company has outstanding $500,000 of 7 per cent cumulative preferred stock, $100 par value per share, and 120,000 shares of no par common out of an authorized 180,000 shares. The remaining 60,000 shares of common have been set aside for the conversion of the bonds. All bonds have been sold, the underwriter announced.

The Warner-Quinlan Co. was chartered in Maine in 1903. It has a complete refinery at Warners, near Elizabethport, N. J., with 5000 barrels' daily capacity. It has bulk distributing station at Long Island City operated by its subsidiary, the Tremley Oil Co.

Through another subsidiary, the Mexican Atlas Petroleum Co., the company, according to President E. Dean Fuller, will own in fee 12,950 acres in Mexico and leases on 9723 acres. The oil properties, he says, are producing more than 2200 barrels of Panuco crude daily and the company is buying 3000 barrels. The company has 143 tank cars, one harbor tug, three barges and one tank steamship. All the stock of this company is pledged as security for the bonds.

"The net tangible assets," says Mr. Fuller, "after deducting depreciation reserves, as shown by the combined balance sheet of Dec. 31, 1924, certified

Consolidated income of Mid-Continent Petroleum Corp. (Cosden & Co.) and subsidiaries for the last five years follow:

	1924	1923	1922	1921	1920
Gross income	.....	$34,602,549	$44,436,391	$36,500,605	$59,671,503
Costs and expense	.....	28,099,565	30,253,590	28,268,340	43,492,946
Operating income	$ 9,687,246	$ 6,502,983	$14,182,801	$ 8,232,265	$16,178,557
Inventory adjustment	.....	3,000,000	.....	.....	.....
Interest, taxes, etc	672,934	459,205	1,778,900	1,549,538	2,626,449
Depreciation, depletion, etc	7,589,347	6,827,402	6,928,872	6,259,073	.....
Net income	$ 1,424,965	†$3,783,624	$ 5,475,029	$ 423,654	$13,552,108
Dividends	479,262	2,931,036	3,860,497	2,525,544	2,230,359
Surplus	$ 945,703	*$6,714,660	$ 1,614,532	*$2,111,890	$11,321,749

†Loss. *Deficit.

Consolidated balance sheets as of Dec. 31 for last five years compare:

	1924	1923	1922	1921	1920
ASSETS					
Refinery, leaseholds, etc	*$61,250,966	$76,587,966	$70,917,835	$66,673,557	$56,183,393
Investments in affiliated co.'s	2,128,325	789,568	792,568	852,568	1,821,098
Cash in sinking fund	.....	.....	255,310	108,249	75,267
Deferred charges	2,141,746	293,187	223,943	201,932	307,105
Cash for royalties	.....	.....	194,636	180,770	.....
Items in suspense	.....	.....	.....	.....	344,601
Cash	4,181,381	1,074,092	11,255,507	1,897,503	2,510,945
Inventories	7,526,269	9,773,328	5,527,900	4,722,413	6,516,974
Notes, accounts receivable	2,458,892	3,603,480	4,302,295	3,280,216	3,392,954
Liberty bonds, etc	.....	.....	.....	24,550	24,204
Total	$79,687,043	$92,121,621	$93,469,994	$77,941,758	$71,176,541
LIABILITIES					
Preferred stock	$ 6,717,805	$ 6,856,870	$ 6,996,710	$ 3,595,090	$ 3,595,040
Common stock	†40,887,030	40,820,370	34,107,420	25,258,340	†20,549,424
Minority interest sub. co.'s	.....	82,229	107,774	1,093,589	122,133
Lease purchase obligations	.....	561,726	1,700,000	.....	.....
Royalties held in trust	.....	.....	194,636	149,770	.....
Notes, accounts payable	1,911,787	11,181,571	2,720,632	3,539,917	3,203,208
Accrued interest, taxes, etc	779,414	281,877	871,989	518,623	1,179,575
Preferred dividends accrued	.....	.....	40,826	20,988	20,988
Dividends payalbe	.....	.....	1,194,375	608,421	505,778
Bonded indebtedness	12,500,000	.....	6,248,300	6,150,500	7,773,000
Purchase money obligations	1,883,250	.....	655,115	529,609	376,057
Suspense items	54,466	.....	82,262	131,734	.....
Reserves	.....	18,296,770	14,837,334	12,042,228	14,846,749
Surplus	14,953,289	14,040,208	23,712,621	24,302,549	19,004,594
Total	$79,687,043	$92,121,621	$93,469,994	$77,941,758	$71,176,541

†Represented by 1,357,414 shares no par value.
*After depreciation and depletion.

Transactions In Oil Shares on New York Stock Exchange

1924 High	1924 Low	1925 High	1925 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended May 23 Sales	First	High	Low	Last	Ch'ge
48	25	66¾	48 (sh)	200,000	N.P.	American Republics	.....	.....	.....	.....	.....	.....	.....	.....
34½	27½	40¼	32 $	56,000,000	$25	Associated Oil	37½cQ	Apr. 25, 25	69,600	37¾	*40¼	37½	39½	+2¾
140½	78½	117½	95½	50,000,000	100	Atlantic Refining	.....	June 16, 24	12,400	105½	111	105½	109½	+4½
118	108	116	113½	20,000,000	100	do pfd	$1¾Q	May 1, 25	200	116	*116	116	116	+ ¾
23¾	14	30	21	13,000,000	25	Barnsdall Corp. A	.....	Apr. 30, 21	16,400	21¾	23⅞	21	23½	+1⅞
17½	10	23	16¼	3,713,270	25	do B	.....	Apr. 30, 21	600	16¾	19	16¾	19	+1½
4½	1	2⅜	½ (sh)	150,000	N.P.	Caddo Central O. & R	.....	.....	1,000	⅝	⅝	½	½	— ⅛
89¾	19½	32⅞	23¾ $	17,377,000	$25	California Petroleum	43¾cQ	June 1, 25	120,800	29½	30⅞	29⅛	29¼	— ⅜
107	92½	123	100	11,955,100	100	do pfd	$1¾Q	Apr. 1, 25	31,700	113½	*123	113½	122¾	+9¾
63¾	31¾	63¾	42¾	19,832,000	100	General Asphalt Co	.....	.....	23,700	53	58⅜	52¾	56	+3⅛
100	71½	100	86½	7,416,000	100	do pfd	$1¾Q	June 1, 25	300	94	95	90¾	95	+2
45	38¾	57¾	42	28,866,650	25	General Petroleum	50cQ	Mar. 16, 25	62,200	51⅞	54¾	51½	54¾	+2¾
82½	61	85	59	25,000,000	100	Houston Oil Co	.....	.....	18,700	68	71	68	70	+7
16¾	5¾	38½	13½ (sh)	450,000	N.P.	Independent Oil & Gas	25cQ	Mar. 31, 25	53,500	28¾	30	27⅞	29½	+1⅛
7¾	3¾	10¾	5¼ $	7,830,450	10	Indian Refining Co	.....	Dec. 15, 20	3,000	7½	8¼	7⅜	8¼	+ ¾
75	60	95	77	2,296,400	100	do pfd	.....	Dec. 15, 21	100	81	81	81	81	+2
1	¼	1¼	⅜	1,682,280	$10	Kansas & Gulf Corp	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	23¾	14¾ (sh)	996,302	N.P.	Louisiana Oil Refining	.....	.....	22,600	18⅞	19½	18½	18¾	0
37½	24⅜	35½	25¼ (sh)	330,000	N.P.	Maracaibo Oil	.....	.....	4,400	26⅜	28	26⅜	27	+ ¾
42	29	46¼	32¾ (sh)	1,649,566	N.P.	Marland Oil Co	.....	July 1, 23	89,000	41⅞	43¼	41¾	44	+3¼
190	190	250	225 $	45,942,800	$100	Mexican Petroleum Co	$3Q	Apr. 20, 25	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	12,000,000	$100	do pfd	$2Q	Apr. 20, 25	.....	.....	.....	.....	.....	.....
25¾	14½	22¾	11¾ (sh)	945,989	N.P.	Mexican Seaboard Oil	.....	Nov. 15, 24	5,400	16	17¼	16	16¾	+ ¾
40¾	22⅜	35⅜	26 (sh)	1,357,800	N.P.	Mid-Continent Petroleum (Cosden)	.....	Aug. 1, 23	33,300	28¾	32	28½	32	+3½
95	80	90¾	88 $	6,998,000	$100	do pfd	$1¾Q	Mar. 2, 25	1,400	87½	91	87½	91	+3½
6¼	1	1¾	¾ $	29,800,220	$10	Middle States Oil Corp	.....	July 1, 23	3,800	¾	⅞	¾	⅞	+ ⅛
58¾	45	65¼	52¾ (sh)	3,500,000	N.P.	Pacific Oil Co	$1S.A.	Jan. 20, 25	93,500	58½	60⅜	58½	59⅜	+ ⅜
45	44¼	83⅞	64 $	48,292,450	$50	Pan American P. & T	$1.50Q	Apr. 20, 25	24,500	77¼	81	76¾	80	+3
64⅝	41¾	84½	63⅜	89,269,400	50	do Class B	$1.50Q	Apr. 20, 25	238,400	77⅝	82½	77½	80¾	+2¾
4¾	1¾	5⅝	3 (sh)	198,770	N.P.	Panhandle P. & R	.....	.....	500	3½	3⅝	3⅜	3⅜	+ ⅛
42½	29	60¾	43 $	3,855,770	$100	do pfd	.....	July 2, 23	800	45	50	45	50	+4⅞
42½	28½	46¾	36¾ (sh)	1,849,904	N.P.	Phillips Petroleum	50cQ	Apr. 1, 25	61,700	41¼	43⅜	40¾	43⅜	+2
4½	1½	3¾	1¾ $	29,622,925	$25	Pierce Oil Corp	.....	.....	14,000	2⅜	2¾	2⅜	2⅜	0
36	20	40	25½	15,000,000	100	do pfd	.....	Feb. 1, 22	700	36	37¼	36	37¼	+1¼
5¾	4¾	8¼	5¾ (sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	2,600	7¾	7⅞	7½	7½	— ⅛
43½	22¾	32½	22 $	11,467,850	50	Producers & Refiners	.....	Sept. 15, 23	6,000	24¾	28⅜	24¾	28	+3
47½	42	47⅝	43½	2,845,350	50	do pfd	87½cQ	May 1, 25	100	44½	44½	†43⅝	43⅞	—1⅛
30¼	20	33¾	25¾	71,499,850	25	Pure Oil Co	37½cQ	June 1, 25	32,500	27¾	29⅝	27⅝	29⅛	+1⅜
105½	92	106½	103	18,000,000	100	do 8% pfd	$2Q	Apr. 1, 25	100	105	105	105	105	+2
59½	40¾	57¾	48¼ (sh)	817,193	13.40	Royal Dutch, N. Y. shares	$3.18½	Aug. 12, 24	29,900	50⅝	52¾	50½	52⅜	+1⅞
42	33	45¾	40¾ (sh)	113,608	£2	Shell Transport & T	95c	Jan. 24, 25	.....	.....	.....	.....	.....	.....
22½	15¾	28¾	22½ (sh)	10,000,000	N.P.	Shell Union Oil Corp	25cQ	Mar. 31, 25	26,100	24¾	25¼	24½	25⅛	+ ½
99½	91½	101¾	99½ $	20,000,000	$100	do pfd	$1½Q	May 15, 25	300	101	101⅜	101	101⅜	0
84	10¾	26¾	19¾	7,205,740	10	Simms Petroleum Co	50Q	Jan. 2, 25	32,200	23⅝	24⅞	23¾	24⅝	+1
27½	15	24⅞	17 (sh)	4,482,225	N.P.	Sinclair Consolidated	.....	May 31, 24	76,600	19⅝	22	19¾	21¾	+2
90	75	94⅜	78¾ $	18,541,100	$100	do pfd	$2Q	May 15, 25	1,000	84½	91	84½	91	+8½
29	17¼	30½	21¾	20,856,590	25	Skelly Oil Co	.....	.....	38,800	26	27½	25¾	27½	+1⅜
68½	55½	67¼	56¾	255,324,250	25	S. O. California	50cQ	Mar. 16, 25	20,600	x58¾	60	58¼	59⅞	+1½
42¼	33	47½	38¾	507,856,025	25	S. O. New Jersey	25cQ	Mar. 16, 25	63,900	44⅜	44¾	43½	44⅝	+1⅜
119½	115¾	119	116¾	199,972,900	100	do pfd	$1¾Q	Mar. 16, 25	2,700	118⅜	118⅜	117⅝	118⅜	— ⅛
8¼	2⅜	6¼	4 (sh)	1,116,268	N.P.	Superior Oil Corp	.....	Dec. 20, 20	6,400	4⅜	4⅜	4	4	— ⅜
48¾	37¾	49	42¾ $	164,450,000	$25	The Texas Co	75cQ	Mar. 31, 25	88,300	45	48⅞	44¾	48½	+3½
18¼	8	25¾	11½	8,380,340	10	Texas Pacific Coal & Oil	.....	June 30, 23	21,500	14⅞	16¾	14⅞	15⅝	+ ⅜
161	116¼	152	122	50,442,900	100	Tide Water Oil Co	$1Q	Mar. 31, 25	1,700	138	140¾	136	139¾	+1¼
6¾	3¾	5¾	3⅞ (sh)	3,232,529	N.P.	Transcontinental Oil Co	.....	.....	45,500	5	5½	5	5¼	+ ⅛
59	35	43¾	36¾ $	40,480,800	$25	Union Oil of California	45cQ	May 10, 25	19,900	37	39¾	37	38¾	+1¾
128¾	94	128¾	118½	18,115,000	$100	Union Tank Car Co	$1¾Q	June 1, 25	700	124	128⅛	124	128⅛	+5⅛
110¾	106¾	117¾	113¾	12,000,000	100	do pfd	$1¾Q	June 1, 25	400	115	115	115	115	0
29¼	25½	31¾	25¾ (sh)	460,000	N.P.	White Eagle Oil & Ref	50cQ	Apr. 20, 25	7,600	27	28¾	26½	28¾	+1¾

*New High †New Low xEx-Dividend Total Sales 1,533,600

Standard Oil Stock Traded In New York Curb Market

1924 High	1924 Low	1925 High	1925 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended May 22 Sales	First	High	Low	Last	Ch'ge
18¾	14¾	26¾	18 £	3,000,000	£1	Anglo American	45cS.A.	Nov. 15, 24	16,900	24¾	26	23½	24½	— ¼
4⅞	2	4	2¾ (sh)	500,000	N.P.	Atlantic Lobos	.....	.....	2,200	3¾	* 4¼	3¾	3⅞	+ ⅛
16	5	12	6⅞ $	10,000,000	$10	do pfd	.....	.....	900	9	*12	9	12	+2
165	155	239	206¾	1,000,000	$100	Borne-Scrymser	†$4S.A.	Apr. 15, 24	60	210	211	209	211	.....
84½	51	72	59¾	10,000,000	50	Buckeye Pipe Line	$1Q	Mar. 14, 25	300	62	62¾	61	62¾	+1¾
83½	47⅜	70	48½	3,000,000	25	Chesebrough Mfg. Co	62½cQ	Mar. 31, 25	100	60¼	60¼	60¼	60¼	— ¾
118	112	115	110	1,000,000	100	do pfd	$1¾Q	Mar. 31, 25	10	115	*115	115	115	+ ½
.....	.....	31¾	21¾	30,208,590	$10	Continental Oil (Maine)	25cQ	Mar. 16, 25	83,100	24⅞	26½	24⅞	26⅜	+1⅜
80	11¾	15¾	10¾	1,500,000	25	Crescent Pipe Line	.....	Sept. 15, 23	300	11¾	11⅞	11¾	11¾	+ ¼
140	110¾	150	132	3,000,000	100	Cumberland Pipe Line	$3Q	Mar. 16, 25	310	146¾	147½	146¼	146½	— ½
105	74	96	76	5,000,000	100	Eureka Pipe Line	$1Q	May 1, 25	226	76	80	76	80	+3½
69¾	52	65	54	16,000,000	100	Galena Signal Oil	$1Q	Mar. 31, 25	775	55	56¾	55	55	0
115	100½	105	100	4,000,000	100	do new pfd	$2Q	Mar. 31, 25	60	104½	104½	104½	104½	+ ½
116	110	113	108	2,000,000	100	do old pfd	$2Q	Mar. 31, 25	.....	.....	.....	.....	.....	.....
43¾	34½	65½	42¾	45,750,000	25	Humble Oil & Ref	50cQ	Apr. 1, 25	83,800	55⅛	*65½	55⅛	64¾	+8⅜
161	120	154½	127	20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 30, 24	420	144¾	145	143¾	145	+1½
.....	.....	34¾	27¼ (sh)	6,275,640	N.P.	Imperial New w.i	25cQ	June 1, 25	44,100	29¾	*34½	29¾	34¼	+4⅛
100	66	84	70	$5,000,000	50	Indiana Pipe Line	$1Q	May 15, 25	40	73	74	73	74	+2
24¼	16¾	28¾	22¾ (sh)	7,118,138	N.P.	International Petroleum	25c	Apr. 30, 25	57,300	25¼	27¾	25¼	27⅜	+2⅛
162	122	159	130¾ $	180,247,100	100	Magnolia Petroleum	1%stk.	Apr. 5, 25	4,940	141½	155	141½	152	+11
25¼	20¾	25¼	22	6,362,500	12½	National Transit	50cQ	Mar. 16, 25	600	22½	23	22½	23	— ⅝
107½	72	88	59	5,000,000	100	New York Transit	75cQ	Apr. 15, 25	200	62	63	†59	63	+2
79⅝	55	75	61¾	4,000,000	100	Northern Pipe Line	$3S.A.	Jan. 1, 25	10	82¾	82¾	82¾	82¾	— ¼
43	27	44½	31½	60,000,000	25	Ohio Oil Co	50cQ	Mar. 31, 25	3,700	64¼	69	64¼	68¾	+3½
54¾	49½	65⅝	50¾	10,000,000	25	Penn.-Mex. Fuel	50c	May 21, 25	700	32⅞	33	†31½	32	—1
111	100	128	106	60,000,000	25	Prairie O. & G	50cQ	Apr. 30, 25	52,300	54¾	62½	54	62	+7½
230	175	259	200	81,000,000	100	Prairie Pipe Line	$2Q	Apr. 30, 25	1,400	118	121	118	120½	+2½
100	80½	103	81	4,000,000	100	Solar Refining Co	$5S.A.	Dec. 20, 24	420	228	237	223	234	+5
171	117	197	139	10,000,000	100	Southern Pipe Line Co	$1Q	June 1, 25	190	81	84½	81	84½	+3½
89	68	84	65	20,000,000	100	South Penn Oil Co	.....	Sept. 30, 22	1,190	167	180	167	174	+6
69¾	54¼	70	59¾	3,500,000	100	Southwest Pa. Pipe Lines	$1Q	Apr. 1, 25	20	67	67	67	67	+2⅛
69¾	32½	46	30¾	223,756,258	25	S. O. Indiana	62½cQ	Mar. 16, 25	89,900	65	68¾	64⅞	68⅝	+3¾
121¼	101	124¾	114¾	8,000,000	25	S. O. Kansas	.....	June 16, 24	9,200	33½	39	33⅜	38½	+5
202	198	270	241	16,864,434	25	S. O. Kentucky	$1Q	Mar. 31, 25	2,400	119¼	120	119¼	119⅞	— ⅜
48	37¾	48¾	41	3,000,000	100	S. O. Nebraska	$5S.A.	Dec. 20, 24	150	245	255	245	255	—9
277½	275	369	358	225,324,650	25	S. O. New York	35cQ	Mar. 16, 25	11,800	44½	44⅞	43¾	44⅝	+ ⅜
330	115	128	117½	14,000,000	100	S. O. Ohio	$2½Q	Apr. 1, 25	260	360	362	356	358	—4
81	20	27	16	7,000,000	100	do pfd	$1¾Q	June 1, 25	310	120	120¾	120	120	— ½
88½	56½	96¾	80¾	1,722,931	25	Swan & Finch	.....	Nov. 1, 19	510	17	17½	16	17¾	+ ¼
90	25	30½	30	61,523,075	25	Vacuum Oil Co	50cQ	Mar. 20, 25	10,000	88	91⅜	87⅝	90¼	†+3⅝
				100,000	10	Washington Oil Co	.....	Jan. 31, 22	.....	.....	.....	.....	.....	.....

†Borne Scrymser $2 extra April 15

by Price, Waterhouse & Co., adjusted to give effect to this financing, are equal to over $3,300 for each $1,000 bond. Of these net tangible assets over $1,000,000 represents net quick assets. Fixed assets carried on the books at $3,835,800 have been recently appraised at $5,128,700, of which lands and plants appraised at $3,140,000 are located on New York Harbor."

Pan-American Western Company Formed

NEW YORK, May 22.—Articles of incorporation for the Pan-American Western Petroleum Co. have been taken out in Delaware. This company will be operated by E. L. Doheny who recently sold the eastern properties of the Pan-American Petroleum & Transport Co. to interests with which the Standard Oil Co. of Indiana is connected.

The Western company will have 1,000,000 shares of no par capital stock of which 200,000 shares will be Class A and 800,000 shares Class B. Reports from Los Angeles are that Mr. Doheny's plans are progressing and that he intends to market abroad as well as on the Pacific coast, in which event he will require tanker facilities. The old Pan-American fleet went to the Standard of Indiana and associated in the sale.

R. M. Sands who was assistant secretary of the old Pan-American has resigned to go with Mr. Doheny and has been succeeded by E. P. Shannon. V. J. McLoughlin who for years was cashier of the Pan-American Petroleum & Transport, has been elected assistant treasurer.

Louisiana Oil Report For First Quarter

NEW YORK, May 23.—Louisiana Oil Refining Co. in the first three months of 1925 earned $129,180 after interest but before depreciation, depletion, and development expenses. The condensed report follows:

Earnings	$240,844
Deductions	45,517
Balance	$195,327
Interest	66,147
Net income	$129,180

The balance sheet as of Dec. 31, 1924 shows:

Assets	
Cash	$1,741,958
Accounts receivable	500,014
Accrued interest, notes rec.	42,837
Inventories	1,104,498
Plant less deprecia. and depl.	17,568,448
Sinking fund	27,794
Investments	88,000
Bond discount	137,667
Prepaid expenses	79,846
Total	$21,291,062
Liabilities	
Accounts payable	$509,694
Notes payable	345,056
Accrued accounts	151,793
Notes pay. under spec. agree't	64,000
Invincible Oil liquidation acc't	10,347
Funded debt	4,128,438
Contingencies, etc.	254,175
Capital stock	4,289,095
Unearned appreciation	6,805,022
Surplus	4,733,442
Total	$21,291,062

New York Curb Bonds

Week Ended May 23

	High	Low	Last	Ch'ge
Cities Serv. 7s B	167	167	167	+4
do 7s C	120	118⅛	120	+1⅛
do 7s D	101¾	101¼	101⅜	— ⅛
do 7s E	112	112	112	+ ¼
Galena S O 7s	105½	105	105	— ½
Gen. Pet. 6s	101⅜	101¼	101⅜	+ ⅛
Gulf Oil 5s	99¼	99	99⅛	+ ⅛
do 5½s '28	101⅞	101⅞	101⅞	+ ⅜
Pennok Oil 6s	100¼	100¼	100¼	
Pure Oil 6½s	102½	101	102	+1
S O N Y 6½s	107¾	107⅜	107⅜	+ ⅛
Sun Oil 5½s	97½	96½	97½	+ ⅝
Tidal Osage 7s	104½	104	104½	0
Transcon. Oil 7s	102¼	101	102	+ ½
Union Oil Cal. 5s	95¾	95	95¾	+ ¾
United Oil Prod. 8s	30¾	30¾	30¾	+ ⅝
Vacuum Oil 7s	106⅛	105⅞	106	+ ⅛
Valvoline 7s	104⅜	104⅜	104⅜	+ ⅛

New York Bonds

Week Ended May 23

	High	Low	Last	Ch'ge
Associated Oil Co. gold 6s	103¾	102¾	102¾	0
Atlantic Refg. debs 5s	99⅞	99½	99¾	0
Barnsdall Corp. 8s	101⅝	105	105⅛	0
California Pet. sf 6s	104	103¼	103¾	+ ½
Empire G & F 7½s	103⅞	103¼	103⅜	— ⅛
Gen. Asphalt 6s	103	102¾	103	+ ¼
Humble O. & R. 5½s	102	101½	102	+ ½
Mid-Con Pet. 6½s	98⅝	97½	98⅝	+1⅛
Pan Amer P & T 6s	116¾	111¾	115	+2½
do 7s	106¼	106	106⅛	+ ⅛
Pierce Oil debs 8s	106½	106½	106½	0
Prod. & Refrs. 8s	111	110¾	111	+ ¾
Sinclair Con. 7s	94	91⅝	94	+2¼
do 6s	113½	108¾	112⅝	+4⅛
do 6½s	88½	86½	88¼	+ ¼
Sinclair Crude 6s	100¾	100½	100¾	0
Sinclair P L sf 5s	88	86¾	88	+1¼
Skelly Oil 6½s	115	111	114	+2½
Tide Water Oil 6½s	103½	103¼	103¼	+1
Union Oil Calif. 6s	104¼	104	104¼	+ ⅛
Union Tank Car 7s	104¾	104¾	104¾	+ ¼

New York Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions week ended May 22 Sales	First	High	Low	Last	Ch'ge
....	.....	8¼	2⅝	....	Amer. Maracaibo	29,800	7½	* 8¼	7¾	8	+ ½
7	4	8¾	5	$10	Ark.Nat.Gas	5,300	6¾	7	6¾	6½	+ ⅛
6¾	2¾	4½	2¾	25c	Carib.Synd	2,100	4⅛	4¼	4	4	— ⅛
190	132	212	175	$100	Cities Service	1,120	183	194	181	190	+8
.....	.....	38⅞	35	20	do new	13,800	36½	*38⅞	36½	38¼	+1⅝
82¾	67¾	82¼	80¾	100	do pfd	1,500	81¾	82	81¾	82	— ⅛
7¾	6⅛	7¾	7¾	10	do pfd. B	600	7½	7⅝	7½	7⅝	— ⅛
19	13¾	21¾	17⅝	10	do Bkrs. Sh	1,600	18¼	19⅛	18⅛	19	+1
10¾	2¾	13¾	8¾	N.P.	Creole Synd	8,500	12	12	11⅜	11¾	— ⅛
8	1¾	7	4¾	N.P.	Derby Oil & Ref	700	5	5½	5	5½	
34¼	17⅞	27	23	N.P.	do pfd	200	24¼	24¼	23	23	—1½
.60	.12	.25	.18	$5	Federal Oil	.....	.....	.....	.....	.....	.....
.....	.....	3¾	1⅜	N.P.	Gilliland v.t.c.	400	1½	1½	1½	1½	— ⅛
.60	.15	.27	.15	$10	Glenrock	1,000	.20	.20	.20	.20	+5
67¾	56	71	63¾	25	Gulf Oil Corp	6,900	65½	68⅛	65½	67½	+1
7	1⅜	5⅞	2¾	N.P.	Kirby Petroleum	1,900	3¾	4⅛	3¾	4⅛	+ ⅛
6¾	2⅛	7¾	5	N.P.	Lago Petroleum	49,900	5½	6	5½	5¾	+ ⅛
4¾	1⅝	4¼	1¾	N.P.	Marland of Mexico	800	4	4	3½	4	0
.....	.....	2	1¾	$1	Mountain & Gulf	300	1⅝	1⅝	1½	1½	— ⅛
20¾	16	22¾	18¾	10	Mountain Prod	17,800	21½	*22¼	21½	22¼	+ ⅜
14	9⅛	14⅝	11¾	5	Mutual Oil ctfs	.....	.....	.....	.....	.....	.....
6¾	3½	5¾	3¾	5	New Bradford Oil	2,000	5⅛	5¼	5⅛	5¼	+ ⅛
44	17	24¾	16¾	10	New England Fuel	.....	.....	.....	.....	.....	.....
14	8¾	11½	8¾	25	New York Oil	900	9⅜	*11½	9⅜	11½	+2⅛
33¾	29¾	33¾	31¾	25	Ohio Fuel Corp	.....	.....	.....	.....	.....	.....
6	.70	1¾	.90	N.P.	Peer Oil Corp	1,500	1	1⅛	1	1⅛	0
18¾	12¾	25¾	16	$10	Pennok Oil	6,400	23¼	*25¾	23	25	+1⅛
57¾	5¾	32½	18¾	25	Red Bank Oil	1,200	26	27	26	27	+1
5½	3	9⅝	3½	N.P.	Ryan Consolidated	1,900	5⅜	6¼	5⅜	6¼	+ ⅛
10¾	6	8¾	6½	$10	Salt Creek Cons	700	7½	7⅝	7⅜	7⅝	+ ⅛
27½	10⅜	27⅝	24	10	Salt Creek Prod	9,500	26⅜	27¼	26⅜	27¼	+ ⅝
2½	.80	2	1	5	Sapulpa Refining	.....	.....	.....	.....	.....	.....
16¾	6¾	13¾	9	10	Tidal Osage	.....	.....	.....	.....	.....	.....
4⅛	2¾	4⅞	3⅛	5	Venezuelan Pet	13,700	4¼	4⅜	4⅛	4⅛	— ⅛
8½	4¾	7¾	5⅝	5	Wilcox Oil & Gas	16,700	6	6	5¾	5⅞	0
18¾	4¾	7	3¾	N.P.	Woodley Petroleum	1,600	4⅞	5¼	4⅞	5¼	+ ⅛

Pittsburgh Stock Exchange

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended May 22 Sales	First	High	Low	Last	Ch'ge
7	4	8¾	5¼	$10	Arkansas Nat. Gas	6,416	6¼	7	6¼	6⅝	+ ⅜
40½	35¾	.....	.....	N.P.	Columbia Gas	.....	.....	.....	.....	.....	.....
.....	.....	108½	108¾	$100	Duquesne Lt.7s pfd.	143	108½	*108½	108	108	0
30	30	.....	.....	25	Fayette County Gas	.....	.....	.....	.....	.....	.....
33½	26¾	40	32¼	25	Lone Star Gas	1,480	38½	38¾	38½	38½	— ⅛
33¼	28¾	34¼	31	25	Ohio Fuel Corp	2,819	32½	32¾	32¼	32½	+ ⅛
16½	11¾	16¼	12½	1	Ohio Fuel Oil	30	13¾	13¾	13¾	13¾	0
28½	22¾	31½	26	25	Oklahoma Nat. Gas	1,023	29½	29¾	29½	29½	+ ⅜
9¾	6	8¾	6	5	Pittsburgh O. & G	872	6¼	6½	†6	6½	+ ⅛
10½	6	8¾	6¾	10	Salt Creek Cons	300	7½	7½	7½	7½	0
16½	8	13¾	8¾	10	Tidal Osage	100	10	10	10	10	—¼
92	92	.....	.....	100	do pfd	.....	.....	.....	.....	.....	.....

Pittsburgh Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended May 22 Sales	First	High	Low	Last	Ch'ge
2¼	2¼	.....	.....	N.P.	Arkansas Fuel	.....	.....	.....	.....	.....	.....
1	.20	2¼	.60	$5	Colombia Synd	.....	.....	.....	.....	.....	.....
.70	.25	.60	.15	5	Duquesne Oil	485	.21	.21	.21	.21	.....
9¼	5¾	9	7	10	Forest Oil	.....	.....	.....	.....	.....	.....
66¾	57	70	64	25	Gulf Oil Corp	25	68½	68½	68½	68½	+½
23¾	21	.....	.....	N.P.	International Pet	.....	.....	.....	.....	.....	.....
4½	4½	.....	.....	N.P.	Lago Petroleum	.....	.....	.....	.....	.....	.....
6	5	.....	.....	$10	Marshall Oil	.....	.....	.....	.....	.....	0
2¾	1¾	2¾	1¾	1	Oklahoma Eastern	4,100	1¾	1¾	1¾	1¾	0
.....	.....	¾	⅜	....	do rights	.....	.....	.....	.....	.....	.....
.77	.35	.45	.35	10	Omar O. & G	.....	.....	.....	.....	.....	.....
8	5¾	7	5	5	States Oil	.....	.....	.....	.....	.....	.....
14	10	11	9	10	TidalOsagenon-vot'g	.....	.....	.....	.....	.....	.....

*New High †New Low x Ex Dividend